APPENDIX 3I

EVALUATION FOR HIGH FREQUENCY SEISMIC INPUT

3I.1 Introduction

The seismic analysis and design of the AP1000 plant is based on the Certified Seismic Design Response Spectra (CSDRS) shown in subsection 3.7.1.1. These spectra are based on Regulatory Guide 1.60 with an increase in the 25 hertz region. Ground Motion Response Spectra (GMRS) for some Central and Eastern United States rock sites show higher amplitude at high frequency than the CSDRS. Evaluations are described in this appendix for an envelope response spectra with high frequency for the seismic input. The resulting spectra of this site are shown in Figure 3I.1-1 and Figure 3I.1-2 and compare this hard rock high frequency (HRHF) envelope response spectra at the foundation level against the AP1000 CSDRS for both the horizontal and vertical directions for 5% damping. The HRHF envelope response spectra exceed the CSDRS for frequencies above about 15 Hz.

High frequency seismic input is generally considered to be non-damaging as described in Reference 1. The evaluation of the AP1000 nuclear island for the high frequency input is based on the analysis of a limited sample of structures, components, supports, and piping to demonstrate that the high frequency seismic response is non-damaging. The evaluation includes building structures, reactor pressure vessel and internals, primary component supports, primary loop nozzles, piping, and equipment.

This appendix describes the methodology and criteria used in the evaluation to confirm that the high frequency input is not damaging to equipment and structures qualified by analysis for the AP1000 CSDRS. It provides supplemental criteria for selection and testing of equipment whose function might be sensitive to high frequency. The results of the high frequency evaluation demonstrating that the AP1000 plant is qualified for this type of input are documented in a technical report (Reference 2). This report will provide a summary of the analysis and test results.

3I.2 High Frequency Seismic Input

Presented in Figures 3I.1-1 and 3I.1-2 is a comparison of the horizontal and vertical HRHF envelope response spectra and the AP1000 CSDRS. The HRHF envelope response spectra presented are calculated at foundation level (39.5' below grade), at the upper most competent material and treated as an outcrop for calculation purposes.

For each direction, the HRHF envelope response spectra exceed the design spectra in higher frequencies (greater than 15 Hz horizontal and 20 Hz vertical). The spectra are used for the HRHF envelope response spectra. If necessary, the HRHF envelope response spectra are enhanced at low frequencies so that HRHF envelope response spectra fully envelope all of the hard rock sites.

These HRHF envelope response spectra are further limited in that the shear wave velocity limitation is defined at the bottom of the basemat equal to or higher than 7,500 fps, while maintaining a shear wave velocity equal to or above 8,000 fps at the lower depths.

3I.3 NI Models Used To Develop High Frequency Response

The NI20 nuclear island model described in Appendix 3G is analyzed in ACS SASSI using the HRHF time histories applied at foundation level to obtain the motion at the base.

A modal analysis of the NI05 model for both the auxiliary and shield buildings and containment internal structure (CIS) has been performed for each of these regions. Specific areas within each wall or floor where out-of-plane modes, which may respond to either CSDRS or HRHF input (including structures with modes less than 33 Hz and between 33 Hz to 50 Hz), have been identified. The survey reveals that some regions, typically in the middle of a floor or wall, exhibit amplified behavior compared to the critical nodes at the corner and edge building locations. The amplified FRS for these regions is generated in addition to the typical set of critical nodes for building analysis by a single time history analysis of the NI05 building model subject to the HRHF time history input. Seismic response spectra for each of the "flexible" nodes are considered when selecting the pre-existing "group" spectra, which is the envelope of the entire floor in that area.

Evaluation of incoherent HRHF spectra has been performed. The CSDRS and HRHF seismic responses were compared with coherent and incoherent considerations at a number of locations in the nuclear island. There are some exceedances, mostly above the 15 hertz region, and these are typical of the plant comparative responses. The steel containment vessel (SCV) was excluded from the evaluation because the HRHF spectra at the base of the SCV are enveloped by the AP1000 CSDRS spectra at the base of the SCV.

Structures designed to the CSDRS input are adequately designed for the HRHF input because the HRHF coherent results are enveloped by the CSDRS results.

3I.4 Evaluation Methodology

The demonstration that the AP1000 nuclear power plant is qualified for the high frequency seismic response does not require the analysis of the total plant. The evaluations made are of representative systems, structures, and components, selected by screening, as potentially sensitive to high frequency input in locations where there were exceedances in the high frequency region. Acceptability of this sample is considered sufficient to demonstrate that the AP1000 is qualified.

The high frequency seismic analyses that are performed use time history or broadened response spectra. The analysis is not performed using the combination spectra of the CSDRS and the HRHF envelope response spectra. Separate analyses with each spectra are used.

The high frequency seismic analyses used the soil-structure interaction code ACS SASSI. The results presented in this report are based on the stochastic (multiple, statistical analyses) seismic incoherent soil-structure interaction analysis approach referred herein as the simulation approach.

The evaluations performed assess the ability of the system, structure, or component to maintain its safety function.

Supplementary analyses are performed as needed to show that high frequency floor response spectra exceedances are not damaging. These analyses can include: gap nonlinearities; material inelastic behavior; multi point response spectra analyses where the high frequency response excites a local part of the system. Tests on equipment are specified as needed where function cannot be demonstrated by analysis, or analysis is not appropriate.

3I.5 General Selection Screening Criteria

The following general screening criteria are used to identify representative AP1000 systems, structures, and components (SSCs) for the samples to be evaluated to demonstrate acceptability of the AP1000 nuclear power plant for the high frequency motion.

- Select systems, structures, and components based on their importance to safety. This includes the review of component safety function for the SSE event and its potential failure modes due to an SSE. Those components whose failure modes would result in safe shutdown are excluded.

- Select systems, structures, and components that are located in areas of the plant that experience large high frequency seismic response.

- Select systems, structures, and components that have significant modal response within the region of high frequency amplification. Significance is defined by such items as modal mass; participation factor, stress and/or deflection.

- Select systems, structures, and components that have significant stress as compared to allowable when considering load combinations that include seismic.

3I.6 Evaluation

In this section the portions of structures, the components, and the systems that are evaluated for the high frequency seismic response are identified. The sample to be evaluated, based on the screening criteria applicable to the SSCs consists of the following:

- Building Structures

  – Auxiliary Building – 3 locations
  – Shield Building – 8 locations
  – CIS – 2 locations

- Primary Coolant Loop

  – Reactor Vessel and Internals
  – Primary Component Supports
  – Reactor Coolant Loop Primary Equipment Nozzles

- Piping Systems – ASME Class 1, 2, and 3 piping systems will be evaluated for the HRHF GMRS. This evaluation is within the scope of the piping DAC (see COL Information Item 3.9-7).

- Electro-Mechanical Equipment – Equipment that is potentially sensitive to high frequency input (see Table 3I.6-1)

These structures, systems, and equipment are discussed in more detail in the sections that follow.

3I.6.1 Building Structures

Maintaining the NI buildings structural integrity is important to the safety of the plant. Representative portions of the buildings that are evaluated for the effect of high frequency input are selected based on those areas that can experience high seismic shear and moment loads due to the seismic event. Areas chosen are at the base of the shield building, in the vicinity of auxiliary building floors that have fundamental frequencies in the high frequency region, and the corners of the auxiliary building. Three locations are selected on the auxiliary building that reflect the bottom of a wall where the shear and moment would be large, a wall in the vicinity of a floor that is influenced by high frequency response, and a corner intersection of walls. Eight locations are evaluated on the shield building. Four at elevation 107' and four at elevation 211'. These locations are located on the east, west, north and south sides. The south-west wall of the refueling canal is evaluated since it is a representative wall on the refueling canal. The CA02 wall in the CIS building is evaluated since it is a representative wall associated with the IRWST.

The evaluation consists of a comparison of the loads from the high frequency input to those obtained from the AP1000 design spectra, shown in Figures 3I.1-1 and 3I.1-2, for these representative building structures. The NI building structures are considered qualified for the high frequency input if the seismic loads from the Regulatory Guide 1.60 (modified) envelope those from the high frequency input. If there is any exceedance, this is evaluated further to confirm that the existing design is adequate.

3I.6.2 Primary Coolant Loop

A failure within the reactor coolant loop could challenge the integrity of the reactor coolant pressure boundary. Therefore, it is chosen for evaluation. The components evaluated are as follows:

- Reactor vessel and internals
- Reactor vessel supports
- Steam generator supports
- Reactor coolant loop primary equipment nozzles

The reactor vessel and internals are selected since they are important to safety and their analysis is representative of major primary components. The building structure below the reactor vessel supports is fairly stiff and there may be significant vertical amplification at the supports of the reactor pressure vessel. Further, reactor vessel internals have relatively complex structural systems

including gap nonlinearities and sliding elements. Also, they may be sensitive to high frequency input as summarized below:

- Vertical and horizontal modes of the upper internals and the reactor vessel modes are in the relatively high frequency range.

- Additional high frequencies are associated with nonlinear impact

The evaluation consists of a comparison of the loads from the high frequency input to those obtained from the Regulatory Guide 1.60 (modified) input. Qualification is shown for the high frequency input if the seismic loads from the Regulatory Guide 1.60 (modified) envelope those from the high frequency input. If there is exceedance, then comparison is made for the combination of the seismic with the design basis pipe break loads and steady state loads. Qualification is then shown if the high frequency loads are relatively insignificant compared to the other loads, or there are no required design changes.

Maintaining the integrity of the reactor vessel and steam generator supports is important to preserving the primary component safety function. They are representative of supports on components, and see high loads.

The reactor coolant loop nozzles at the cold and hot leg interfaces of the reactor pressure vessel, reactor coolant pumps, and steam generators are important to include in the evaluation since these are critical areas of components.

The evaluation of the primary component supports and reactor coolant loop nozzles consists of a comparison of the loads from the high frequency input to those obtained from the Regulatory Guide 1.60 (modified) input. These items are considered qualified for the high frequency input if the seismic loads from the Regulatory Guide 1.60 (modified) envelope those from the high frequency input. If there is any exceedance, then an evaluation is made combining the high frequency loads with the other load components (e.g., thermal, pressure, dead) and a comparison made to the design loads. If the design loads envelope the load combinations that include the high frequency seismic input, then the nozzles and supports are considered qualified for the high frequency input.

3I.6.3 Piping Systems

ASME Class 1, 2, and 3 piping systems will be evaluated for the HRHF GMRS. This evaluation is within the scope of the piping DAC (see COL Information Item 3.9-7).

3I.6.4 Electrical and Electro-Mechanical Equipment

The groups of safety-related equipment considered for evaluation are those that may be sensitive to the high frequency input. This includes those cabinet-mounted equipment, field sensors, and appurtenants that may be sensitive to high frequency seismic inputs identified in Table 3I.6-1.

Sample safety-related cabinets have been identified that are typically sensitive to seismic input. Evaluations were performed to verify these cabinets do not have excessive seismic excitation on their mounted equipment, the cabinet designs do not require changes due to the high frequency

input, and the cabinets will maintain their structural integrity during the high frequency input. Time history analyses of these cabinets were performed for both the Regulatory Guide 1.60 (modified) and the high frequency inputs so that comparisons can be made to their seismic response from both seismic inputs. This analytical study reported in APP-GW-GLR-115 (Reference 2) concluded that safety-related equipment may be screened.

The AP1000 HRHF screening program for determination and evaluation of potential high frequency sensitive equipment is in compliance with the NRC requirements in Section 4.0, "Identification and Evaluation of HF Sensitive Mechanical and Electrical Equipment/Components," of COL/DC-ISG-1 (Reference 3). The AP1000 HRHF screening program is also consistent with the guidelines developed as part of an industry review document in the EPRI White Paper, "Seismic Screening of Components Sensitive to High Frequency Vibratory Motions" (Reference 4), transmitted to the NRC on June 28, 2007, for determining the safety-related equipment and components that may be HRHF sensitive, and screening procedures to ensure that any safety-related equipment and components sensitive to HRHF seismic excitation are screened out. This industry review of HF exceedance and further evaluations of SSCs performed by Westinghouse concluded that HRHF envelope response spectra are less harmful than the CSDRS except for the functionality of potential HRHF-sensitive components.

The AP1000 HRHF screening program is based on an HF evaluation study reported in APP-GW-GLR-115 (Reference 2). The HF evaluation study concluded that AP1000 In-Structure Response Spectra (ISRS) developed from the AP1000 CSDRS would, in the majority of cases, produce equipment stress results of the same magnitude or higher than the stress results produced from HRHF seismic excitation. The exception to this condition is when the dominant natural frequency of the equipment is in the HRHF exceedance range and there can be significantly more response because the frequency coincides with the input driving force. Under this condition, forces/stresses generated in the equipment could be due to the acceleration exceedance; therefore, the equipment will be subjected to HRHF seismic evaluation/testing to screen out equipment by verifying its performance and acceptability under HRHF excitation. Review of seismic test data for electrical and microprocessor based cabinets performed to generic and high frequency excitation concluded that seismic testing that peaks in the lower frequency range will produce larger displacements and velocities, and will result in higher stresses in the equipment.

The goal of the AP1000 HRHF screening program is to identify the potential safety-related equipment and components that have the potential to be HRHF-sensitive and show them to be acceptable for their specific application (screened-out). The AP1000 HRHF screening program is a two step process. The first step is an HRHF susceptibility review to identify potential high frequency sensitive safety-related equipment. The second step is the screened-out equipment process to demonstrate its acceptability for the HRHF seismic excitation. Evaluation of screened-in equipment as defined in COL/DC-ISG-1 (Reference 3) is not performed because all safety-related equipment that is screened-in will be eliminated or shown to be acceptable through a design change process.

For the AP1000 HRHF screening program, the following conditions must exist:

1. Plant-specific HRHF GMRS exceeds the AP1000 CSDRS in the high frequency range at 5% critical damping.

2. Safety-related equipment has potential failure modes involving change of state, chatter, signal change/drift, and connection problems.

Table 3I.6-2 is a list of potential HRHF-sensitive AP1000 safety-related equipment developed based on Table 3.11-1 of Section 3.11, "Environmental Qualification of Mechanical and Electrical Equipment." The equipment in Table 3.2-3 of Section 3.2, "AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment," and Table 3I.6-3 is not HRHF-sensitive. The structural integrity and operability of equipment in Table 3.2-3 and Table 3I.6-3 will not be impacted by the high frequency excitation.

The HRHF susceptibility review of AP1000 safety-related equipment is not performed for potential failure modes associated with mounting, connections, fasteners, joints, and structural interface. These potential failure modes are addressed through the seismic qualification of the safety-related equipment to the AP1000 ISRS testing performed in compliance with IEEE Standard 344-1987. The AP1000 ISRS qualification testing generates higher displacements and velocities than those resulting from HRHF seismic excitation since the AP1000 ISRS is controlled by the lower frequency range. The higher displacement, velocities, and accelerations will detect these equipment structural failure modes if they exist.

At locations where HRHF response spectra show exceedance of the CSDRS and there is a likelihood of equipment damage, further evaluations would be performed to verify that the existing qualification is adequate for equipment not high frequency sensitive, as listed in Table 3I.6-3, under the following conditions:

- Safety-related equipment must have modes or natural frequencies in the range of interest.

- Evaluation will apply the same acceptance criteria and methodologies used in CSDRS qualification.

To demonstrate acceptability for both CSDRS and HRHF testing, the test response spectra must envelop the CSDRS and HRHF spectra, respectively, with margin over the frequency range of interest in compliance with IEEE Standard 344-1987. In the event that the CSDRS and/or HRHF response spectra would be revised after the qualification program has been completed, a reconciliation effort would be performed to verify that the CSDRS and HRHF testing is still valid. The reconciliation effort may result in requalification activities and qualification documentation revisions.

High Frequency Screening Process – Step 1

The potential failure modes of high frequency sensitive component types and assemblies are important considerations in the high frequency program. The following are potential failure modes of high frequency sensitive components/equipment:

- Inadvertent change of state
- Chatter
- Change in accuracy and drift in output signal or set-point
- Electrical connection failure or intermediacy (e.g., poor quality solder joints)

- Mechanical connection failure
- Mechanical misalignment/binding (e.g., latches, plungers)
- Fatigue failure (e.g., solder joints, ceramics, self-taping screws, spot welds)
- Improperly and unrestrained mounted components
- Inadequately secured/locked mechanical fasteners and connections

Components and equipment determined to have potential failure modes involve change of state, chatter, signal change/drift, and connection problems will be demonstrated to be acceptable through the performance of a supplemental high frequency screening test. Those high frequency sensitive components having failure modes associated with mounting, connections and fasteners, joints, and interface are considered to be acceptable as a result of the AP1000 ISRS qualification testing per IEEE Standard 344-1987 and/or require quality assurance inspection and process/design controls.

High Frequency Screening Process – Step 2

The HRHF susceptibility review is to verify that the subject equipment is capable of performing its safety-related function under HRHF seismic excitation. All AP1000 safety-related equipment will be qualified to the AP1000 ISRS, and the dominant natural frequencies of the equipment will be determined. The EPRI White Paper (Reference 4) identifies the following three evaluation methods to demonstrate that potential HRHF-sensitive safety-related equipment is not HRHF vulnerable:

1. Existing seismic qualification test data for potential high frequency sensitive equipment should be reviewed for applicability and adequacy of the test method to demonstrate sufficient high frequency content.

2. Systems/circuits containing potentially sensitive items should be reviewed for inappropriate/unacceptable system actions due to assumed change of state, contact chatter/intermittency, set point drifts, or loss of calibration.

3. HRHF vibration screening test is conducted to identify any HRHF sensitivities/abnormalities of the components. Several conventional test methods are recommended.

The first and third evaluation methods are part of the AP1000 HRHF screening program and are further detailed below. The AP1000 HRHF seismic screening evaluation will employ the AP1000 HRHF SSE response spectra as input in verifying potential HF sensitive safety-related equipment is not vulnerable to HRHF seismic excitation. Additional seismic test margin will be introduced into the HRHF seismic screening evaluation as needed.

Method 1: Review of Seismic Test Data

Available seismic test data can be used for AP1000 HRHF plant applications when:

- Seismic qualification testing performed on potential HRHF-sensitive safety-related equipment meets as a minimum the AP1000 ISRS in compliance with IEEE Standard 344-1987.

- Safe shutdown earthquake (SSE) test had sufficient energy content in the HRHF region to verify that the safety-related equipment is not vulnerable to HRHF seismic excitation.

No additional seismic testing is required for safety-related equipment previously tested and whose qualification level envelops the HRHF required response spectra (RRS).

IEEE Standard 344-1987 provides guidance to ensure that the seismic test input is generated and in compliance with the frequency range of interest. To demonstrate acceptability for frequency content, it is necessary to show that the frequency content of the test waveform is at least as broad as the frequency content of the amplified region of the RRS except at the low frequencies where non-enveloping is permitted under certain conditions (refer to IEEE Standard 344-1987 subclauses 7.6.3.1(10) and 7.6.3.1(13)). An evaluation of the test input waveform should be conducted per IEEE Standard 344-1987 Annex B to verify the test data has sufficient content over the frequency range of interest throughout the input time history. If an evaluation of the test input is performed, and the data demonstrates sufficient frequency content in the high frequency range throughout the time history, then the data is acceptable.

Method 3: HRHF Screening Test

The HRHF screening test is a supplemental test to the required seismic qualification methods performed in accordance with IEEE Standard 344-1987 for those plants that have high frequency exceedance of the AP1000 CSDRS. The purpose of the HRHF screening test is to demonstrate that the potential HRHF-sensitive safety-related equipment will perform its safety-related function as required under HRHF seismic excitation. The HRHF screening test is performed in conjunction with the AP1000 ISRS seismic qualification testing, or it is performed as a supplemental test after completion of the AP1000 ISRS seismic qualification testing. The AP1000 ISRS and HRHF test input time histories have 30-second durations with frequency content up to the cutoff frequency developed in accordance with subclause 7.6.3 (Multiple-Frequency Tests) and Annex B (Frequency Content and Stationarity) of IEEE Standard 344-1987. During the AP1000 ISRS and HRHF testing, the equipment will be functional and monitored to verify the safety-related function was demonstrated. Screening testing will be performed using HRHF response spectra as defined in the EPRI White Paper (Reference 4) when AP1000 HRHF inputs are not available. The HRHF response spectra will be generated based on the 5g and 15g peak spectral acceleration at 5% critical damping in the 25 Hz to 50 Hz frequency range. If the HRHF screening test cannot demonstrate the equipment to be acceptable, then the safety-related equipment will be removed or modified and additional testing or justification will be required.

The AP1000 safety-related equipment will be seismic qualified to the AP1000 ISRS associated with the mounting location of the equipment as a minimum. Seismic qualification testing will consist of five AP1000 ISRS operating basis earthquakes (OBEs) followed by one SSE as a minimum. The OBE level will be at least one-half the SSE level. The OBE testing is used to vibration age and address low-cycle fatigue of equipment prior to SSE testing. Cyclic fatiguing of equipment for HRHF exceedance area is adequately addressed by performing five OBE (one-half the SSE) and a minimum of one SSE seismic test runs in compliance with IEEE Standard 344-1987 prior to performing the supplemental HRHF screening test. Additional OBE testing in the high frequency exceedance range is adequately addressed by the demonstration that the peak stress cycles required for five one-half SSE events using the AP1000 HRHF ISRS are

equivalent to or enveloped by the peak stress cycles resulting from five one-half SSE events and one full SSE event using the AP1000 CSD ISRS.

The test results of AP1000 seismic qualification programs with multiple operational states (for example, relays have three possible operational states: de-energized, energized, and change of state) will be used to determine the most sensitive equipment electrical operational state. The HRHF test run is performed on the equipment in its most sensitive electrical operational state to demonstrate its safety-related function under HRHF seismic excitation. If this is not possible, additional HRHF screening tests will be performed as needed to address the other most sensitive electrical operation states.

3I.7 References

1. EPRI Draft White Paper, "Considerations for NPP Equipment and Structures Subjected to Response Levels Caused by High Frequency Ground Motions," Transmitted to NRC March 19, 2007.

2. APP-GW-GLR-115, "Effect of High Frequency Seismic Content on SSCs," Westinghouse Electric Company LLC.

3. COL/DC-ISG-1, "Interim Staff Guidance on Seismic Issues of High Frequency Ground Motion," May 19, 2008.

4. EPRI White Paper, "Seismic Screening of Components Sensitive to High Frequency Vibratory Motions," June 2007.

5. Letter, R. Sisk (Westinghouse) to NRC, "AP1000 Response to Request for Additional Information (SRP3.10)," DCP/NRC2280, October 17, 2008.

Table 3I.6-1

POTENTIAL HIGH FREQUENCY SENSITIVE EQUIPMENT LIST

- Equipment or components with moving parts and required to perform a switching function during the seismic event (e.g., circuit breakers, contactors, auxiliary switches, molded case circuit breakers, motor control center starters, and pneumatic control assemblies)
- Components with moving parts that may bounce or chatter such as relays and actuation devices (e.g., shunt trips)
- Unrestrained components
- Potentiometers
- Process switches and sensors (e.g., pressure/differential pressure, temperature, level, limit/position, and flow)
- Components with accuracy requirements that may drift due to seismic loading
- Interfaces such as secondary contacts
  - Connectors and connections (including circuit board connections for digital and analog equipment)

Table 3I.6-2 (Sheet 1 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Batteries	
IDSA 125V 60 Cell Battery 1A	IDSA-DB-1A
IDSA 125V 60 Cell Battery 1B	IDSA-DB-1B
IDSB 125V 60 Cell Battery 1A	IDSB-DB-1A
IDSB 125V 60 Cell Battery 1B	IDSB-DB-1B
IDSB 125V 60 Cell Battery 2A	IDSB-DB-2A
IDSB 125V 60 Cell Battery 2B	IDSB-DB-2B
IDSC 125V 60 Cell Battery 1A	IDSC-DB-1A
IDSC 125V 60 Cell Battery 1B	IDSC-DB-1B
IDSC 125V 60 Cell Battery 2A	IDSC-DB-2A
IDSC 125V 60 Cell Battery 2B	IDSC-DB-2B
IDSD 125V 60 Cell Battery 1A	IDSD-DB-1A
IDSD 125V 60 Cell Battery 1B	IDSD-DB-1B
Spare 125V 60 Cell Battery 1A	IDSS-DB-1A
Spare 125V 60 Cell Battery 1B	IDSS-DB-1B
Battery Chargers	
IDSA Battery Charger	IDSA-DC-1
IDSB Battery Charger	IDSB-DC-1
IDSB Battery Charger 2	IDSB-DC-2
IDSC Battery Charger 1	IDSC-DC-1
IDSC Battery Charger 2	IDSC-DC-2
IDSD Battery Charger	IDSD-DC-1
Spare Battery Charger	IDSS-DC-1

Table 3I.6-2 (Sheet 2 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Distribution Panels	
IDSA 250 Vdc Dist Panel	IDSA-DD-1
IDSB 250 Vdc Dist Panel	IDSB-DD-1
IDSC 250 Vdc Dist Panel	IDSC-DD-1
IDSD 250 Vdc Dist Panel	IDSD-DD-1
IDSA 120 Vac Dist Panel 1	IDSA-EA-1
IDSA 120 Vac Dist Panel 2	IDSA-EA-2
IDSB 120 Vac Dist Panel 1	IDSB-EA-1
IDSB 120 Vac Dist Panel 2	IDSB-EA-2
IDSB 120 Vac Dist Panel 3	IDSB-EA-3
IDSC 120 Vac Dist Panel 1	IDSC-EA-1
IDSC 120 Vac Dist Panel 2	IDSC-EA-2
IDSC 120 Vac Dist Panel 3	IDSC-EA-3
IDSD 120 Vac Dist Panel 1	IDSD-EA-1
IDSD 120 Vac Dist Panel 2	IDSD-EA-2
Fuse Panels	
IDSA Fuse Panel	IDSA-EA-4
IDSB Fuse Panel	IDSB-EA-4
IDSB Fuse Panel	IDSB-EA-5
IDSB Fuse Panel	IDSB-EA-6
IDSC Fuse Panel	IDSC-EA-4
IDSC Fuse Panel	IDSC-EA-5
IDSC Fuse Panel	IDSC-EA-6
IDSD Fuse Panel	IDSD-EA-4

Table 3I.6-2 (Sheet 3 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Transfer Switches	
IDSA Fused Transfer Switch Box 1	IDSA-DF-1
IDSB Fused Transfer Switch Box 1	IDSB-DF-1
IDSB Fused Transfer Switch Box 2	IDSB-DF-2
IDSC Fused Transfer Switch Box 1	IDSC-DF-1
IDSC Fused Transfer Switch Box 2	IDSC-DF-2
IDSD Fused Transfer Switch Box 1	IDSD-DF-1
IDSS Fused Transfer Switch Box 1	IDSS-DF-1
Spare Battery 125/250 Vdc Disconnect Switch	IDSS-SW-1
IDSS Spare Termination Box	IDSS-DF-2
IDSS Spare Termination Box	IDSS–DF-3
IDSS Spare Termination Box	IDSS-DF-4
IDSS Spare Termination Box	IDSS-DF-5
IDSS Spare Termination Box	IDSS-DF-6
Motor Control Centers	
IDSA 250 Vdc MCC	IDSA-DK-1
IDSB 250 Vdc MCC	IDSB-DK-1
IDSC 250 Vdc MCC	IDSC-DK-1
IDSD 250 Vdc MCC	IDSD-DK-1
Switchboards	
IDSA 250 Vdc Switchboard 1	IDSA-DS-1
IDSB 250 Vdc Switchboard 1	IDSB-DS-1
IDSB 250 Vdc Switchboard 2	IDSB-DS-2
IDSC 250 Vdc Switchboard 1	IDSC-DS-1
IDSC 250 Vdc Switchboard 2	IDSC-DS-2
IDSD 250 Vdc Switchboard 1	IDSD-DS-1

Table 3I.6-2 (Sheet 4 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Transformers	
IDSA Regulating Transformer 1	IDSA-DT-1
IDSB Regulating Transformer 1	IDSB-DT-1
IDSC Regulating Transformer 1	IDSC-DT-1
IDSD Regulating Transformer 1	IDSD-DT-1
Inverters	
IDSA Inverter	IDSA-DU-1
IDSB Inverter 1	IDSB-DU-1
IDSB Inverter 2	IDSB-DU-2
IDSC Inverter 1	IDSC-DU-1
IDSC Inverter 2	IDSC-DU-2
IDSD Inverter	IDSD-DU-1
Switchgear	
RCP 1A 6900V Switchgear 31	ECS-ES-31
RCP 1A 6900V Switchgear 32	ECS-ES-32
RCP 2A 6900V Switchgear 51	ECS-ES-51
RCP 2A 6900V Switchgear 52	ECS-ES-52
RCP 1B 6900V Switchgear 41	ECS-ES-41
RCP 1B 6900V Switchgear 42	ECS-ES-42
RCP 2B 6900V Switchgear 61	ECS-ES-61
RCP 2B 6900V Switchgear 62	ECS-ES-62
Reactor Trip Switchgear	PMS-JD-RTSA01
Reactor Trip Switchgear	PMS-JD-RTSA02
Reactor Trip Switchgear	PMS-JD-RTSB01
Reactor Trip Switchgear	PMS-JD-RTSB02

Table 3I.6-2 (Sheet 5 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Reactor Trip Switchgear	PMS-JD-RTSC01
Reactor Trip Switchgear	PMS-JD-RTSC02
Reactor Trip Switchgear	PMS-JD-RTSD01
Reactor Trip Switchgear	PMS-JD-RTSD02
Level Switches	
Core Makeup Tank A Narrow Range	PXS-JE-LS011A
Core Makeup Tank A Narrow Range	PXS-JE-LS011B
Core Makeup Tank A Narrow Range	PXS-JE-LS011C
Core Makeup Tank A Narrow Range	PXS-JE-LS011D
Core Makeup Tank B Narrow Range	PXS-JE-LS012A
Core Makeup Tank B Narrow Range	PXS-JE-LS012B
Core Makeup Tank B Narrow Range	PXS-JE-LS012C
Core Makeup Tank B Narrow Range	PXS-JE-LS012D
Core Makeup Tank A Narrow Range	PXS-JE-LS013A
Core Makeup Tank A Narrow Range	PXS-JE-LS013B
Core Makeup Tank A Narrow Range	PXS-JE-LS013C
Core Makeup Tank A Narrow Range	PXS-JE-LS013D
Core Makeup Tank B Narrow Range	PXS-JE-LS014A
Core Makeup Tank B Narrow Range	PXS-JE-LS014B
Core Makeup Tank B Narrow Range	PXS-JE-LS014C
Core Makeup Tank B Narrow Range	PXS-JE-LS014D
Containment Floodup Level	PXS-JE-LS050
Containment Floodup Level	PXS-JE-LS051
Containment Floodup Level	PXS-JE-LS052

Table 3I.6-2 (Sheet 6 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Neutron Detectors	
Source Range Neutron Detector	RXS-JE-NE001A
Source Range Neutron Detector	RXS-JE-NE001B
Source Range Neutron Detector	RXS-JE-NE001C
Source Range Neutron Detector	RXS-JE-NE001D
Intermediate Range Neutron Detector	RXS-JE-NE002A
Intermediate Range Neutron Detector	RXS-JE-NE002B
Intermediate Range Neutron Detector	RXS-JE-NE002C
Intermediate Range Neutron Detector	RXS-JE-NE002D
Power Range Neutron Detector (Lower)	RXS-JE-NE003A
Power Range Neutron Detector (Lower)	RXS-JE-NE003B
Power Range Neutron Detector (Lower)	RXS-JE-NE003C
Power Range Neutron Detector (Lower)	RXS-JE-NE003D
Power Range Neutron Detector (Upper)	RXS-JE-NE004A
Power Range Neutron Detector (Upper)	RXS–JE-NE004B
Power Range Neutron Detector (Upper)	RXS-JE-NE004C
Power Range Neutron Detector (Upper)	RXS-JE-NE004D
Radiation Monitors	
Containment High Range Area Monitor	PXS-JE-RE160
Containment High Range Area Monitor	PXS-JE-RE161
Containment High Range Area Monitor	PXS-JE-RE162
Containment High Range Area Monitor	PXS-JE-RE163
Control Room Supply Air Area Monitor	VBS-JE-RE001A
Control Room Supply Air Area Monitor	VBS-JE-RE001B

Table 3I.6-2 (Sheet 7 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Speed Sensors	
RCP 1A Pump Speed	RCS-JE-ST281
RCP 1B Pump Speed	RCS-JE-ST282
RCP 2A Pump Speed	RCS-JE-ST283
RCP 2B Pump Speed	RCS-JE-ST284
Transmitters	
PCS Water Delivery Flow	PCS-JE-FT001
PCS Water Delivery Flow	PCS-JE-FT002
PCS Water Delivery Flow	PCS-JE-FT003
PCS Water Delivery Flow	PCS-JE-FT004
PCS Storage Tank Water Level	PCS-JE-LT010
PCS Storage Tank Water Level	PCS-JE-LT011
PRHR HX Flow	PXS-JE-FT049A
PRHR HX Flow	PXS-JE-FT049B
RCS Hot Leg 1 Flow	RCS-JE-FT101A
RCS Hot Leg 1 Flow	RCS-JE-FT101B
RCS Hot Leg 1 Flow	RCS-JE-FT101C
RCS Hot Leg 1 Flow	RCS-JE-FT101D
RCS Hot Leg 2 Flow	RCS-JE-FT102A
RCS Hot Leg 2 Flow	RCS-JE-FT102B
RCS Hot Leg 2 Flow	RCS-JE-FT102C
RCS Hot Leg 2 Flow	RCS-JE-FT102D
SG1 Startup Feedwater Flow	SGS-JE-FT055A
SG1 Startup Feedwater Flow	SGS-JE-FT055B
SG2 Startup Feedwater Flow	SGS-JE-FT-056A

Table 3I.6-2 (Sheet 8 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
SG2 Startup Feedwater Flow	SGS-JE-FT056B
MCR Air Delivery Line Flow Rate – A	VES-JE-FT003A
MCR Air Delivery Line Flow Rate – B	VES-JE-FT003B
Plant Vent Flow	VFS-JE-FT101
IRWST Level	PXS-JE-LT045
IRWST Level	PXS-JE-LT046
IRWST Level	PXS-JE-LT047
IRWST Level	PXS-JE-LT048
RCS Hot Leg Water Level	RCS-JE-LT160A
RCS Hot Leg Water Level	RCS-JE-LT160B
PZR Level	RCS-JE-LT195A
PZR Level	RCS-JE-LT195B
PZR Level	RCS-JE-LT195C
PZR Level	RCS-JE-LT195D
SG1 Narrow Range Level	SGS-JE-LT001
SG1 Narrow Range Level	SGS-JE-LT002
SG1 Narrow Range Level	SGS-JE-LT003
SG1 Narrow Range Level	SGS-JE-LT004
SG2 Narrow Range Level	SGS-JE-LT005
SG2 Narrow Range Level	SGS-JE-LT006
SG2 Narrow Range Level	SGS-JE-LT007
SG2 Narrow Range Level	SGS-JE-LT008
SG1 Wide Range Level	SGS-JE-LT011
SG1 Wide Range Level	SGS-JE-LT012
SG1 Wide Range Level	SGS-JE-LT015

Table 3I.6-2 (Sheet 9 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
SG1 Wide Range Level	SGS-JE-LT016
SG2 Wide Range Level	SGS-JE-LT013
SG2 Wide Range Level	SGS-JE-LT014
SG2 Wide Range Level	SGS-JE-LT017
SG2 Wide Range Level	SGS-JE-LT018
Spent Fuel Pool Level	SFS-JE-LT019A
Spent Fuel Pool Level	SFS-JE-LT019B
Spent Fuel Pool Level	SFS-JE-LT019C
Air Storage Tank Pressure – A	VES-JE-PT001A
Air Storage Tank Pressure – B	VES-JE-PT001B
Containment Pressure Normal Range	PCS-JE-PT005
Containment Pressure Normal Range	PCS-JE-PT006
Containment Pressure Normal Range	PCS-JE-PT007
Containment Pressure Normal Range	PCS-JE-PT008
Containment Pressure Extended Range	PCS-JE-PT012
Containment Pressure Extended Range	PCS-JE-PT013
Containment Pressure Extended Range	PCS-JE-PT014
RCS Wide Range Pressure	RCS-JE-PT140A
RCS Wide Range Pressure	RCS-JE-PT140B
RCS Wide Range Pressure	RCS-JE-PT140C
RCS Wide Range Pressure	RCS-JE-PT140D
PZR Pressure	RCS-JE-PT191A
PZR Pressure	RCS-JE-PT191B
PZR Pressure	RCS-JE-PT191C
PZR Pressure	RCS-JE-PT191D

Table 3I.6-2 (Sheet 10 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Main Steam Line SG1 Pressure	SGS-JE-PT030
Main Steam Line SG1 Pressure	SGS-JE-PT031
Main Steam Line SG1 Pressure	SGS-JE-PT032
Main Steam Line SG1 Pressure	SGS-JE-PT033
Main Steam Line SG2 Pressure	SGS-JE-PT034
Main Steam Line SG2 Pressure	SGS-JE-PT035
Main Steam Line SG2 Pressure	SGS-JE-PT036
Main Steam Line SG2 Pressure	SGS-JE-PT037
Main Control Room Differential Pressure	VES-JE-PDT004A
Main Control Room Differential Pressure	VES-JE-PDT004B
Protection and Safety Monitoring Systems	
Protection and Safety Monitoring System Cabinets	Multiple
MCR/RSW Transfer Switch Panel A	PMS-JW-004A
MCR/RSW Transfer Switch Panel B	PMS-JW-004B
MCR/RSW Transfer Switch Panel C	PMS-JW-004C
MCR/RSW Transfer Switch Panel D	PMS-JW-004D
Source Range Neutron Flux Preamplifier Panel A	PMS-JW-005A
Source Range Neutron Flux Preamplifier Panel B	PMS-JW-005B
Source Range Neutron Flux Preamplifier Panel C	PMS-JW-005C
Source Range Neutron Flux Preamplifier Panel D	PMS-JW-005D
Intermediate Range Neutron Flux Preamplifier Panel A	PMS-JW-006A
Intermediate Range Neutron Flux Preamplifier Panel B	PMS-JW-006B
Intermediate Range Neutron Flux Preamplifier Panel C	PMS-JW-006C

Table 3I.6-2 (Sheet 11 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Intermediate Range Neutron Flux Preamplifier Panel D	PMS-JW-006D
Power Range Neutron Flux High Voltage Distribution Box A	PMS-JW-007A
Power Range Neutron Flux High Voltage Distribution Box B	PMS-JW-007B
Power Range Neutron Flux High Voltage Distribution Box C	PMS-JW-007C
Power Range Neutron Flux High Voltage Distribution Box D	PMS-JW-007D
Main Control Room	
Operator Workstation A	N/A
Operator Workstation B	N/A
Supervisor Workstation	N/A
Switch Station (Including Switches)	N/A
QDPS MCR Display Unit	PMS-JY-001B
QDPS MCR Display Unit	PMS-JY-001C
Active Valves	
Containment Isolation – Air Out	
Solenoid Valve	CAS-PL-V014-S
Limit Switch	CAS-PL-V014-L
Containment Isolation – Inlet	
Limit Switch	CCS-PL-V200-L
Motor Operator	CCS-PL-V200-M
Containment Isolation – Outlet	
Limit Switch	CCS-PL-V207-L
Motor Operator	CCS-PL-V207-M
Containment Isolation – Outlet	
Limit Switch	CCS-PL-V208-L
Motor Operator	CCS-PL-V208-M

Table 3I.6-2 (Sheet 12 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
RCS Purification Stop Valve	
Limit Switch	CVS-PL-V001-L
Motor Operator	CVS-PL-V001-M
RCS Purification Stop Valve	
Limit Switch	CVS-PL-V002-L
Motor Operator	CVS-PL-V002-M
RCS Letdown Stop Valve	
Limit Switch	CVS-PL-V003-L
Motor Operator	CVS-PL-V003-M
WLS Letdown IRC Isolation	
Limit Switch	CVS-PL-V045-L
Solenoid Valve	CVS-PL-V045-S1
Letdown Flow ORC Isolation	
Limit Switch	CVS-PL-V047-L
Solenoid Valve	CVS-PL-V047-S1
Auxiliary PZR Spray Isolation	
Limit Switch	CVS-PL-V084-L
Solenoid Valve	CVS-PL-V084-S
Makeup Line Containment Isolation	
Limit Switch	CVS-PL-V090-L
Motor Operator	CVS-PL-V090-M
Makeup Line Containment Isolation	
Limit Switch	CVS-PL-V091-L
Motor Operator	CVS-PL-V091-M

Table 3I.6-2 (Sheet 13 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Hydrogen Addition Containment Isolation	
Limit Switch	CVS-PL-V092-L
Solenoid Valve	CVS-PL-V092-S
Demineralizer Water System Isolation	
Limit Switch	CVS-PL-V136A-L
Solenoid Valve	CVS-PL-V136A-S
Demineralized Water System Isolation	
Limit Switch	CVS-PL-V136B-L
Solenoid Valve	CVS-PL-V136B-S
PCCWST Isolation Valve	
Limit Switch	PCS-PL-V001A-L
Solenoid Valve	PCS-PL-V001A-S1
PCCWST Isolation Valve	
Limit Switch	PCS-PL-V001B-L
Solenoid Valve	PCS-PL-V001B-S1
PCCWST Isolation Valve	
Limit Switch	PCS-PL-V001C-L
Motor Operator	PCS-PL-V001C-M
PCCWST Isolation Valve	
Limit Switch	PCS-PL-V002A-L
Motor Operator	PCS-PL-V002A-M
PCCWST Isolation Valve	
Limit Switch	PCS-PL-V002B-L
Motor Operator	PCS-PL-V002B-M

Table 3I.6-2 (Sheet 14 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
PCCWST Isolation Valve	
Limit Switch	PCS-PL-V002C-L
Motor Operator	PCS-PL-V002C-M
Containment Isolation – Air Sample Line	
Limit Switch	PSS-PL-V008-L
Solenoid Operator	PSS-PL-V008-S
Containment Isolation – Liquid Sample Line	
Limit Switch	PSS-PL-V010A-L
Solenoid Operator	PSS-PL-V010A-S
Containment Isolation – Liquid Sample Line	
Limit Switch	PSS-PL-V010B-L
Solenoid Operator	PSS-PL-V010B-S
Containment Isolation – Liquid Sample Line	
Limit Switch	PSS-PL-V011-L
Solenoid Valve	PSS-PL-V011-S
Containment Isolation - Sample Return Line	
Limit Switch	PSS-PL-V023-L
Solenoid Valve	PSS-PL-V023-S
Containment Isolation - Air Sample Line	
Limit Switch	PSS-PL-V046-L
Solenoid Valve	PSS-PL-V046-S
Core Makeup Tank A Discharge Isolation	
Limit Switch	PXS-PL-V014A-L
Solenoid Valve	PXS-PL-V014A-S1

Table 3I.6-2 (Sheet 15 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Core Makeup Tank B Discharge Isolation	
Limit Switch	PXS-PL-V014B-L
Solenoid Valve	PXS-PL-V014B-S1
Core Makeup Tank A Discharge Isolation	
Limit Switch	PXS-PL-V015A-L
Solenoid Valve	PXS-PL-V015A-S1
Core Makeup Tank B Discharge Isolation	
Limit Switch	PXS-PL-V015B-L
Solenoid Valve	PXS-PL-V015B-S1
Nitrogen Supply Outside Containment Isolation	
Limit Switch	PXS-PL-V042-L
Solenoid Valve	PXS-PL-V042-S
PRHR HX Discharge Isolation	
Limit Switch	PXS-PL-V108A-L
Solenoid Valve	PXS-PL-V108A-S1
PRHR HX Discharge Isolation	
Limit Switch	PXS-PL-V108B-L
Solenoid Valve	PXS-PL-V108B-S1
Recirc Sump A Isolation	
Limit Switch	PXS-PL–V118A-L
Squib Operator	PXS-PL–V118A-T
Recirc Sump B Isolation	
Limit Switch	PXS-PL-V118B-L
Squib Operator	PXS-PL-V118B-T

Table 3I.6-2 (Sheet 16 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Recirc Sump A	
Limit Switch	PXS-PL-V120A-L
Squib Operator	PXS-PL-V120A-T
Recirc Sump B	
Limit Switch	PXS-PL-V120B-L
Squib Operator	PXS-PL-V120B-T
IRWST Injection A	
Limit Switch	PXS-PL-V123A-L
Squib Operator	PXS-PL-V123A-T
IRWST Injection B	
Limit Switch	PXS-PL-V123B-L
Squib Operator	PXS-PL-V123B-T
IRWST Injection A	
Limit Switch	PXS-PL-V125A-L
Squib Operator	PXS-PL-V125A-T
IRWST Injection B	
Limit Switch	PXS-PL-V125B-L
Squib Operator	PXS-PL-V125B-T
IRWST Gutter Drain Isolation A	
Limit Switch	PXS-PL-V130A-L
Solenoid Valve	PXS-PL-V130A-S1
IRWST Gutter Drain Isolation B	
Limit Switch	PXS-PL-V130B-L
Solenoid Valve	PXS-PL-V130B-S1

Table 3I.6-2 (Sheet 17 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
First Stage ADS	
Limit Switch	RCS-PL-V001A-L
Motor Operator	RCS-PL-V001A-M
First Stage ADS	
Limit Switch	RCS-PL-V001B-L
Motor Operator	RCS-PL-V001B-M
Second Stage ADS	
Limit Switch	RCS-PL-V002A-L
Motor Operator	RCS-PL-V002A-M
Second Stage ADS	
Limit Switch	RCS-PL-V002B-L
Motor Operator	RCS-PL-V002B-M
Third Stage ADS	
Limit Switch	RCS-PL-V003A-L
Motor Operator	RCS-PL-V003A-M
Third Stage ADS	
Limit Switch	RCS-PL-V003B-L
Motor Operator	RCS-PL-V003B-M
Fourth Stage ADS	
Limit Switch	RCS-PL-V004A-L
Squib Operator	RCS-PL-V004A-T
Fourth Stage ADS	
Limit Switch	RCS-PL-V004B-L
Squib Operator	RCS-PL-V004B-T

Table 3I.6-2 (Sheet 18 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Fourth Stage ADS	
Limit Switch	RCS-PL-V004C-L
Squib Operator	RCS-PL-V004C-T
Fourth Stage ADS	
Limit Switch	RCS-PL-V004D-L
Squib Operator	RCS-PL-V004D-T
First Stage ADS Isolation	
Limit Switch	RCS-PL-V011A-L
Motor Operator	RCS-PL-V011A-M
First Stage ADS Isolation	
Limit Switch	RCS-PL-V011B-L
Motor Operator	RCS-PL-V011B-M
Second Stage ADS Isolation	
Limit Switch	RCS-PL-V012A-L
Motor Operator	RCS-PL-V012A-M
Second Stage ADS Isolation	
Limit Switch	RCS-PL-V012B-L
Motor Operator	RCS-PL-V012B-M
Third Stage ADS Isolation	
Limit Switch	RCS-PL-V013A-L
Motor Operator	RCS-PL-V013A-M
Third Stage ADS Isolation	
Limit Switch	RCS-PL-V013B-L
Motor Operator	RCS-PL-V013B-M

Table 3I.6-2 (Sheet 19 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Reactor Vessel Head Vent	
Limit Switch	RCS-PL-V150A-L
Solenoid Operator	RCS-PV-V150A-S
Reactor Vessel Head Vent	
Limit Switch	RCS-PL-V150B-L
Solenoid Operator	RCS-PL-V150B-S
Reactor Vessel Head Vent	
Limit Switch	RCS-PL-V150C-L
Solenoid Operator	RCS-PL-V150C-S
Reactor Vessel Head Vent	
Limit Switch	RCS-PL-V150D-L
Solenoid Operator	RCS-PL-V150D-S
RCS Inner Suction Isolation	
Limit Switch	RNS-PL-V001A-L
Motor Operator	RNS-PL-V001A-M
RCS Inner Suction Isolation	
Limit Switch	RNS-PL-V001B-L
Motor Operator	RNS-PL-V001B-M
RCS Outer Suction Isolation	
Limit Switch	RNS-PL-V002A-L
Motor Operator	RNS-PL-V002A-M
RCS Outer Suction Isolation	
Limit Switch	RNS-PL-V002B-L
Motor Operator	RNS-PL-V002B-M

Table 3I.6-2 (Sheet 20 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
RHR Control/Isolation Valve	
Limit Switch	RNS-PL-V011-L
Motor Operator	RNS-PL-V011-M
RHR Pump Suction Header Isolation	
Limit Switch	RNS-PL-V022-L
Motor Operator	RNS-PL-V022-M
IRWST Suction Line Isolation	
Limit Switch	RNS-PL-V023-L
Motor Operator	RNS-PL-V023-M
RNS – CVS Containment Isolation	
Limit Switch	RNS-PL-V061-L
Air Operator	RNS-PL-V061-S
SDS – MCR Isolation	
Limit Switch	SDS-PL-V001-L
Motor Operator	SDS-PL-V001-M
SDS – MCR Isolation	
Limit Switch	SDS-PL-V002-L
Motor Operator	SDS-PL-V002-M
Containment Isolation	
Limit Switch	SFS-PL-V034-L
Motor Operator	SFS-PL–V034-M
Containment Isolation	
Limit Switch	SFS-PL-V035-L
Motor Operator	SFS- PL-V035-M
Containment Isolation	
Limit Switch	SFS-PL-V038-L
Motor Operator	SFS-PL-V038-M

Table 3I.6-2 (Sheet 21 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
PORV Block Valve	
Limit Switch	SGS-PL-V027A-L
Motor Operator	SGS-PL-V027A-M
PORV Block Valve	
Limit Switch	SGS-PL-V027B-L
Motor Operator	SGS-PL-V027B-M
Steam Line Condensate Drain Isolation	
Limit Switch	SGS-PL-V036A-L
Solenoid Valve	SGS-PL-V036A-S
Steam Line Condensate Isolation	
Limit Switch	SGS-PL-V036B-L
Solenoid Valve	SGS-PL-V036B-S
Main Steam Line Isolation	
Limit Switch	SGS-PL-V040A-L
Solenoid Valve	SGS-PL-V040A-S1
Solenoid Valve	SGS-PL-V040A-S2
Solenoid Valve	SGS-PL-V040A-S3
Solenoid Valve	SGS-PL-V040A-S4
Main Steam Line Isolation	
Limit Switch	SGS-PL-V040B-L
Solenoid Valve	SGS-PL-V040B-S1
Solenoid Valve	SGS-PL-V040B-S2
Solenoid Valve	SGS-PL-V040B-S3
Solenoid Valve	SGS-PL-V040B-S4

Table 3I.6-2 (Sheet 22 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Main Feedwater Isolation	
Limit Switch	SGS-PL-V057A-L
Solenoid Valve	SGS-PL-V057A-S1
Solenoid Valve	SGS-PL-V057A-S2
Solenoid Valve	SGS-PL-V057A-S3
Solenoid Valve	SGS-PL-V057A-S4
Main Feedwater Isolation	
Limit Switch	SGS-PL-V057B-L
Solenoid Valve	SGS-PL-V057B-S1
Solenoid Valve	SGS-PL-V057B-S2
Solenoid Valve	SGS-PL-V057B-S3
Solenoid Valve	SGS-PL-V057B-S4
Startup Feedwater Isolation	
Limit Switch	SGS-PL-V067A-L
Motor Operator	SGS-PL-V067A-M
Startup Feedwater Isolation	
Limit Switch	SGS-PL-V067B-L
Motor Operator	SGS-PL-V067B-M
SG Blowdown Isolation	
Limit Switch	SGS-PL-V074A-L
Solenoid Valve	SGS-PL-V074A-S
SG Blowdown Isolation	
Limit Switch	SGS-PL-V074B-L
Solenoid Valve	SGS-PL-V074B-S

Table 3I.6-2 (Sheet 23 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
SG Series Blowdown Isolation	
Limit Switch	SGS-PL-V075A-L
Solenoid Valve	SGS-PL-V075A-S
SG Series Blowdown Isolation	
Limit Switch	SGS-PL-V075B-L
Solenoid Valve	SGS-PL-V075B-S
Steam Line Condensate Drain Isolation Solenoid Valve	SGS-PL-V086A-S
Steam Line Condensate Drain Isolation Solenoid Valve	SGS-PL-V086B-S
Power Operated Relief Valve	
Limit Switch	SGS-PL-V233A-L
Solenoid Valve	SGS-PL-V233A-S
Power Operated Relief Valve	
Limit Switch	SGS-PL-V233B-L
Solenoid Valve	SGS-PL-V233B-S
MSIV Bypass Isolation Valve	
Limit Switch	SGS- PL-V240A-L
Solenoid Valve	SGS-PL-V240A-S1
Solenoid Valve	SGS-PL-V240A-S2
MSIV Bypass Isolation Valve	
Limit Switch	SGS-PL-V240B-L
Solenoid Valve	SGS-PL-V240B-S1
Solenoid Valve	SGS-PL-V240B-S2

Table 3I.6-2 (Sheet 24 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Main Feedwater Control Valve	
Limit Switch	SGS-PL-V250A-L
Solenoid Valve	SGS-PL-V250A-S
Main Feedwater Control Valve	
Limit Switch	SGS-PL-V250B-L
Solenoid Valve	SGS-PL-V250B-S
Startup Feedwater Control Valve	
Limit Switch	SGS-PL-V255A-L
Solenoid Valve	SGS-PL-V255A-S
Startup Feedwater Control Valve	
Limit Switch	SGS-PL-V255B-L
Solenoid Valve	SGS-PL-V255B-S
MCR Isolation Valve	
Limit Switch	VBS-PL-V186-L
Motor Operator	VBS-PL-V186-M
MCR Isolation Valve	
Limit Switch	VBS-PL-V187-L
Motor Operator	VBS-PL-V187-M
MCR Isolation Valve	
Limit Switch	VBS-PL-V188-L
Motor Operator	VBS-PL-V188-M
MCR Isolation Valve	
Limit Switch	VBS-PL-V189-L
Motor Operator	VBS-PL-V189-M

Table 3I.6-2 (Sheet 25 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
MCR Isolation Valve	
Limit Switch	VBS-PL-V190-L
Motor Operator	VBS-PL-V190-M
MCR Isolation Valve	
Limit Switch	VBS-PL-V191-L
Motor Operator	VBS-PL-V191-M
Actuation Valve A	
Limit Switch	VES-PL-V005A-L
Solenoid Operator	VES-PL-V005A-S
Actuation Valve B	
Limit Switch	VES-PL-V005B-L
Solenoid Operator	VES-PL-V005B-S
Relief Isolation Valve A	
Limit Switch	VES-PL-V022A-L
Solenoid Valve	VES-PL-V022A-S
Relief Isolation Valve B	
Limit Switch	VES-PL-V022B-L
Solenoid Valve	VES-PL-V022B-S
Containment Purge Inlet Isolation	
Limit Switch	VFS-PL-V003-L
Solenoid Valve	VFS-PL-V003-S1
Containment Purge Inlet Isolation	
Limit Switch	VFS-PL-V004-L
Solenoid Valve	VFS-PL-V004-S1

Table 3I.6-2 (Sheet 26 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Containment Purge Discharge Isolation	
Limit Switch	VFS-PL-V009-L
Solenoid Valve	VFS-PL-V009-S1
Containment Purge Discharge Isolation	
Limit Switch	VFS-PL-V010-L
Solenoid Valve	VFS-PL-V010-S1
Vacuum Relief Containment Isolation Valve A - ORC	
Limit Switch	VFS-PL-V800A-L
Motor Operator	VFS-PL-V800A-M
Vacuum Relief Containment Isolation Valve B - ORC	
Limit Switch	VFS-PL-V800B-L
Motor Operator	VFS-PL-V800B-M
Fan Cooler Supply Isolation	
Limit Switch	VWS-PL-V058-L
Solenoid Valve	VWS-PL-V058-S
Fan Cooler Return Isolation	
Limit Switch	VWS-PL-V082-L
Solenoid Valve	VWS-PL-V082-S
Fan Cooler Return Isolation	
Limit Switch	VWS-PL-V086-L
Solenoid Valve	VWS-PL-V086-S
Sump Containment Isolation IRC	
Limit Switch	WLS-PL-V055-L
Solenoid Valve	WLS-PL-V055-S1

Table 3I.6-2 (Sheet 27 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Sump Containment Isolation ORC	
Limit Switch	WLS-PL-V057-L
Solenoid Valve	WLS-PL-V057-S1
RCDT Gas Containment Isolation	
Limit Switch	WLS-PL-V067-L
Solenoid Valve	WLS-PL-V067-S
RCDT Gas Containment Isolation	
Limit Switch	WLS-PL-V068-L
Solenoid Valve	WLS-PL-V068-S
Hot Leg 1 Sample Isolation	
Limit Switch	PSS-PL-V001A-L
Hot Leg 2 Sample Isolation	
Limit Switch	PSS-PL-V001B-L
Core Makeup Tank A CL Inlet Isolation	
Limit Switch	PXS-PL-V002A-L
Motor Operator	PXS-PL-V002A-M
Core Makeup Tank B CL Inlet Isolation	
Limit Switch	PXS-PL-V002B-L
Motor Operator	PXS-PL-V002B-M
PRHR HX Inlet Isolation	
Limit Switch	PXS-PL-V101-L
Motor Operator	PXS-PL-V101-M
Recirc Sump A Isolation	
Limit Switch	PXS-PL-V117A-L
Motor Operator	PXS-PL-V117A-M

Table 3I.6-2 (Sheet 28 of 28)

LIST OF POTENTIAL HIGH FREQUENCY SENSITIVE AP1000 SAFETY-RELATED ELECTRICAL AND ELECTRO-MECHANICAL EQUIPMENT

Description	AP1000 Tag Number
Recirc Sump B Isolation	
Limit Switch	PXS-PL-V117B-L
Motor Operator	PXS-PL-V117B-M
Fourth Stage ADS Isolation	
Limit Switch	RCS-PL-V014A-L
Motor Operator	RCS-PL-V014A-M
Fourth Stage ADS Isolation	
Limit Switch	RCS-PL-V014B-L
Motor Operator	RCS-PL-V014B-M
Fourth Stage ADS Isolation	
Limit Switch	RCS-PL-V014C-L
Motor Operator	RCS-PL-V014C-M
Fourth Stage ADS Isolation	
Limit Switch	RCS-PL-V014D-L
Motor Operator	RCS-PL-V014D-M

Table 3I.6-3 (Sheet 1 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Resistance Temperature Detectors		
PRHR HX Outlet Temperature	RCS-JE-TE161	1
RCS Cold Leg 1A Narrow Range Temperature	RCS-JE-TE121A	1
RCS Cold Leg 1A Narrow Range Temperature	RCS-JE-TE121D	1
RCS Cold Leg 1B Narrow Range Temperature	RCS-JE-TE121B	1
RCS Cold Leg 1B Narrow Range Temperature	RCS-JE-TE121C	1
RCS Cold Leg 2A Narrow Range Temperature	RCS-JE-TE122B	1
RCS Cold Leg 2A Narrow Range Temperature	RCS-JE-TE122C	1
RCS Cold Leg 2B Narrow Range Temperature	RCS-JE-TE122A	1
RCS Cold Leg 2B Narrow Range Temperature	RCS-JE-TE122D	1
RCS Hot Leg 1 Narrow Range Temperature	RCS-JE-TE131A	1
RCS Hot Leg 1 Narrow Range Temperature	RCS-JE-TE131C	1
RCS Hot Leg 1 Narrow Range Temperature	RCS-JE-TE132A	1
RCS Hot Leg 1 Narrow Range Temperature	RCS-JE-TE132C	1
RCS Hot Leg 1 Narrow Range Temperature	RCS-JE-TE133C	1
RCS Hot Leg 1 Narrow Range Temperature	RCS-JE-TE133A	1
RCS Hot Leg 2 Narrow Range Temperature	RCS-JE-TE131B	1
RCS Hot Leg 2 Narrow Range Temperature	RCS-JE-TE131D	1
RCS Hot Leg 2 Narrow Range Temperature	RCS-JE-TE132B	1
RCS Hot Leg 2 Narrow Range Temperature	RCS-JE-TE132D	1
RCS Hot Leg 2 Narrow Range Temperature	RCS-JE-TE133B	1
RCS Hot Leg 2 Narrow Range Temperature	RCS-JE-TE133D	1
RCS Cold Leg 1A Dual Range Temperature	RCS-JE-TE125A	1
RCS Cold Leg 1B Dual Range Temperature	RCS-JE-TE125C	1
RCS Cold Leg 2A Dual Range Temperature	RCS-JE-TE125B	1

Table 3I.6-3 (Sheet 2 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
RCS Cold Leg 2B Dual Range Temperature	RCS-JE-TE125D	1
RCS Hot Leg 1 Wide Range Temperature	RCS-JE-TE135A	1
RCS Hot Leg 2 Wide Range Temperature	RCS-JE-TE135B	1
PZR Reference Leg Level Temperature	RCS-JE-TE193A	1
PZR Reference Leg Level Temperature	RCS-JE-TE193B	1
PZR Reference Leg Level Temperature	RCS-JE-TE193C	1
PZR Reference Leg Level Temperature	RCS-JE-TE193D	1
Thermocouples		**1**
Incore Thermocouples	IIS-JE-TE001-TE042	1
RCP 1A Bearing Water Temperature	RCS-JE-TE211A	1
RCP 1A Bearing Water Temperature	RCS-JE-TE211B	1
RCP 1A Bearing Water Temperature	RCS-JE-TE211C	1
RCP 1A Bearing Water Temperature	RCS-JE-TE211D	1
RCP 1B Bearing Water Temperature	RCS-JE-TE212A	1
RCP 1B Bearing Water Temperature	RCS-JE-TE212B	1
RCP 1B Bearing Water Temperature	RCS-JE-TE212C	1
RCP 1B Bearing Water Temperature	RCS-JE-TE212D	1
RCP 2A Bearing Water Temperature	RCS-JE-TE213A	1
RCP 2A Bearing Water Temperature	RCS-JE-TE213B	1
RCP 2A Bearing Water Temperature	RCS-JE-TE213C	1
RCP 2A Bearing Water Temperature	RCS-JE-TE213D	1
RCP 2B Bearing Water Temperature	RCS-JE-TE214A	1
RCP 2B Bearing Water Temperature	RCS-JE-TE214B	1
RCP 2B Bearing Water Temperature	RCS-JE-TE214C	1
RCP 2B Bearing Water Temperature	RCS-JE-TE214D	1

Table 3I.6-3 (Sheet 3 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Penetrations		
Penetrations (Mechanical)		1
Penetrations (Electrical)		1
Active Valves		
Containment Isolation – Air Out	CAS-PL-V014	2
Containment Isolation – Air In	CAS-PL-V015	2
Containment Isolation – Inlet	CCS-PL-V200	2
Service Air Supply Inside Containment Isolation	CAS-PL-V205	2
Containment Isolation – Inlet	CCS-PL-V201	2
Containment Isolation – Outlet	CCS-PL-V207	2
Containment Isolation – Outlet	CCS-PL-V208	2
CCS Containment Isolation Relief	CCS-PL-V220	2
CCS IRC Relief Valve	CCS-PL-V270	2
CCS IRC Relief Valve	CCS-PL-V271	2
RCS Purification Stop Valve	CVS-PL-V001	2
RCS Purification Stop Valve	CVS-PL-V002	2
RCS Letdown Stop Valve	CVS-PL-V003	2
Demineralizer Flush Line Relief Valve	CVS-PL-V042	2
WLS Letdown IRC Isolation	CVS-PL-V045	2
Letdown Flow ORC Isolation	CVS-PL-V047	2
RCS Purification Check Valve	CVS-PL-V080	2
RCS Purification Stop Valve	CVS-PL-V081	2
RCS Purification Check Valve	CVS-PL-V082	2
Auxiliary PZR Spray Isolation	CVS-PL-V084	2
Auxiliary PZR Spray Isolation	CVS-PL-V085	2
Makeup Line Containment Isolation	CVS-PL-V090	2
Makeup Line Containment Isolation	CVS-PL-V091	2

Table 3I.6-3 (Sheet 4 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Hydrogen Addition Containment Isolation	CVS-PL-V092	2
Hydrogen Addition Containment Isolation	CVS-PL-V094	2
Hydrogen Addition Containment Isolation	CVS-PL-V092	2
Hydrogen Addition Containment Isolation	CVS-PL-V094	2
Makeup Containment Isolation	CVS-PL-V100	2
Demineralizer Water System Isolation	CVS-PL-V136A	2
Demineralized Water System Isolation	CVS-PL-V136B	2
Demin Water Supply Containment Isolation – Inside	DWS-PL-V245	2
Fuel Transfer Tube Gate Valve	FHS-PL-V001	2
Fire Water Containment Supply Isolation – Inside	FPS-PL-V052	2
PCCWST Isolation Valve	PCS-PL-V001A	2
PCCWST Isolation Valve	PCS-PL-V001B	2
PCCWST Isolation Valve	PCS-PL-V001C	2
PCCWST Isolation Valve	PCS-PL-V002A	2
PCCWST Isolation Valve	PCS-PL-V002B	2
PCCWST Isolation Valve	PCS-PL-V002C	2
PCCWST Fire Protection Isolation	PCS-PL-V005	2
PCCWST Emergency Spent Fuel Pool Makeup Isolation	PCS-PL-V009	2
Water Bucket Makeup Line Drain Valve	PCS-PL-V015	2
Water Bucket Makeup Line Isolation Valve	PCS-PL-V020	2
PCS Recirculation Isolation	PCS-PL-V023	2
PCCWST Long-Term Makeup Check Valve	PCS-PL-V039	2
PCCWST Long Term Makeup Isolation Drain Valve	PCS-PL-V042	2
PCCWST Long Term Makeup Isolation Valve	PCS-PL-V044	2
Emergency Makeup to the Spent Fuel Pool Isolation Valve	PCS-PL-V045	2

Table 3I.6-3 (Sheet 5 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
PCCWST Recirculation Return Isolation Valve	PCS-PL-V046	2
Emergency Makeup to the Spent Fuel Pool Drain Isolation Valve	PCS-PL-V049	2
Spent Fuel Pool Long Term Makeup Isolation Valve	PCS-PL-V050	2
Spent Fuel Pool Emergency Makeup Lower Isolation Valve	PCS-PL-V051	2
Containment Isolation – Air Sample Line	PSS-PL-V008	2
Containment Isolation – Liquid Sample Line	PSS-PL-V010A	2
Containment Isolation – Liquid Sample Line	PSS-PL-V010B	2
Containment Isolation – Liquid Sample Line	PSS-PL-V011	2
Containment Isolation – Sample Return Line	PSS-PL-V023	2
Containment Isolation Sample Return	PSS-PL-V024	2
Containment Isolation – Air Sample Line	PSS-PL-V046	2
PWS MCR Isolation	PWS-PL-V418	2
PWS MCR Isolation	PWS-PL-V420	2
PWS MCR Vacuum Relief	PWS-PL-V498	2
Core Makeup Tank A Discharge Isolation	PXS-PL-V014A	2
Core Makeup Tank B Discharge Isolation	PXS-PL-V014B	2
Core Makeup Tank A Discharge Isolation	PXS-PL-V015A	2
Core Makeup Tank B Discharge Isolation	PXS-PL-V015B	2
Core Makeup Tank A Discharge	PXS-PL-V016A	2
Core Makeup Tank B Discharge	PXS-PL-V016B	2
Core Makeup Tank A Discharge	PXS-PL-V017A	2
Core Makeup Tank B Discharge	PXS-PL-V017B	2
Accumulator A Pressure Relief	PXS-PL-V022A	2
Accumulator B Pressure Relief	PXS-PL-V022B	2
Accumulator A Discharge	PXS-PL-V028A	2

Table 3I.6-3 (Sheet 6 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Accumulator B Discharge	PXS-PL-V028B	2
Accumulator A Discharge	PXS-PL-V029A	2
Accumulator B Discharge	PXS-PL-V029B	2
Nitrogen Supply Outside Containment Isolation	PXS-PL-V042	2
IRC Nitrogen Supply Inside Containment Isolation	PXS-PL-V043	2
PRHR HX Discharge Isolation	PXS-PL-V108A	2
PRHR HX Discharge Isolation	PXS-PL-V108B	2
Recirc Sump A Isolation	PXS-PL-V118A	2
Recirc Sump B Isolation	PXS-PL-V118B	2
Recirc Sump A Isolation	PXS-PL-V119A	2
Recirc Sump B Isolation	PXS-PL-V119B	2
Recirc Sump A Isolation	PXS-PL-V120A	2
Recirc Sump B Isolation	PXS- PL-V120B	2
IRWST Injection A	PXS-PL-V122A	2
IRWST Injection B	PXS-PL-V122B	2
IRWST Injection A	PXS-PL-V123A	2
IRWST Injection B	PXS-PL-V123B	2
IRWST Injection A	PXS-PL-V124A	2
IRWST Injection B	PXS-PL-V124B	2
IRWST Injection A	PXS-PL-V125A	2
IRWST Injection B	PXS-PL-V125B	2
IRWST Gutter Drain Isolation A	PXS-PL-V130A	2
IRWST Gutter Drain Isolation B	PXS-PL-V130B	2
First Stage ADS	RCS-PL-V001A	2
First Stage ADS	RCS-PL-V001B	2

Table 3I.6-3 (Sheet 7 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Second Stage ADS	RCS-PL-V002A	2
Second Stage ADS	RCS-PL-V002B	2
Third Stage ADS	RCS-PL-V003A	2
Third Stage ADS	RCS-PL-V003B	2
Fourth Stage ADS	RCS-PL-V004A	2
Fourth Stage ADS	RCS-PL-V004B	2
Fourth Stage ADS	RCS-PL-V004C	2
Fourth Stage ADS	RCS-PL-V004D	2
PZR Safety Valve	RCS-PL-V005A	2
PZR Safety Valve	RCS-PL-V005B	2
ADS Discharge Header A Relief	RCS-PL-V010A	2
ADS Discharge Header B Relief	RCS-PL-V010B	2
First Stage ADS Isolation	RCS-PL-V011A	2
First Stage ADS Isolation	RCS-PL-V011B	2
Second Stage ADS Isolation	RCS-PL-V012A	2
Second Stage ADS Isolation	RCS-PL-V012B	2
Third Stage ADS Isolation	RCS-PL-V013A	2
Third Stage ADS Isolation	RCS-PL-V013B	2
Reactor Vessel Head Vent	RCS-PL-V150A	2
Reactor Vessel Head Vent	RCS-PL-V150B	2
Reactor Vessel Head Vent	RCS-PL-V150C	2
Reactor Vessel Head Vent	RCS-PL-V150D	2
RCS Inner Suction Isolation	RNS-PL-V001A	2
RCS Inner Suction Isolation	RNS-PL-V001B	2
RCS Outer Suction Isolation	RNS-PL-V002A	2

Table 3I.6-3 (Sheet 8 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
RCS Outer Suction Isolation	RNS-PL-V002B	2
RCS Thermal Relief	RNS-PL-V003A	2
RCS Thermal Relief	RNS-PL-V003B	2
RHR Control/Isolation Valve	RNS-PL-V011	2
RNS Discharge Containment Isolation Valve Test Connection	RNS-PL-V012	2
RNS Discharge Containment Isolation	RNS-PL-V013	2
RNS Discharge RCP B Isolation	RNS-PL-V015A	2
RNS Discharge RCP B Isolation	RNS-PL-V015B	2
RNS Discharge RCP B Isolation	RNS-PL-V017A	2
RNS Discharge RCP B Isolation	RNS-PL-V017B	2
RNS Hot Leg Suction Relief	RNS-PL-V021	2
RHR Pump Suction Header Isolation	RNS-PL-V022	2
IRWST Suction Line Isolation	RNS-PL-V023	2
RNS Pump Discharge Relief	RNS-PL-V045	2
RNS – CVS Containment Isolation	RNS-PL-V061	2
Containment Isolation	SFS-PL-V034	2
Containment Isolation	SFS-PL-V035	2
SFS Discharge Containment Isolation	SFS-PL-V037	2
Containment Isolation	SFS-PL-V038	2
SFS Cask Loading Pit to SFS Pump	SFS-PL-V042	2
SFS Pump to Cask Loading Pit	SFS-PL-V045	2
Cask Loading Pit to WLS	SFS-PL-V049	2
Spent Fuel Pool to Cask Washdown Pit Isolation	SFS-PL-V066	2
SFS Containment Isolation Relief	SFS-PL-V067	2
Cask Washdown Pit Drain Isolation	SFS-PL-V068	2

Table 3I.6-3 (Sheet 9 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Refueling Cavity to SG Compartment	SFS-PL-V071	2
Refueling Cavity to SG Compartment	SFS-PL-V072	2
PORV Block Valve	SGS-PL-V027A	2
PORV Block Valve	SGS-PL-V027B	2
Steam Safety Valve SG01	SGS-PL-V030A	2
Steam Safety Valve SG02	SGS-PL-V030B	2
Steam Safety Valve SG01	SGS-PL-V031A	2
Steam Safety Valve SG02	SGS-PL-V031B	2
Steam Safety Valve SG01	SGS-PL-V032A	2
Steam Safety Valve SG02	SGS-PL-V032B	2
Steam Safety Valve SG01	SGS-PL-V033A	2
Steam Safety Valve SG02	SGS-PL-V033B	2
Steam Safety Valve SG01	SGS-PL-V034A	2
Steam Safety Valve SG02	SGS-PL-V034B	2
Steam Safety Valve SG01	SGS-PL-V035A	2
Steam Safety Valve SG02 Steam Line Condensate	SGS-PL-V035B	2
Drain Isolation	SGS-PL-V036A	2
Steam Line Condensate Isolation	SGS-PL-V036B	2
Main Steam Line Isolation	SGS-PL-V040A	2
Main Steam Line Isolation	SGS-PL-V040B	2
Main Feedwater Isolation	SGS-PL-V057A	2
Main Feedwater Isolation	SGS-PL-V057B	2
Startup Feedwater Isolation	SGS-PL-V067A	2
Startup Feedwater Isolation	SGS-PL-V067B	2
SG Blowdown Isolation	SGS-PL-V074A	2

Table 3I.6-3 (Sheet 10 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	Description	Description
SG Blowdown Isolation	SGS-PL-V074B	2
SG Series Blowdown Isolation	SGS-PL-V075A	2
SG Series Blowdown Isolation	SGS-PL-V075B	2
Steam Line Condensate Drain Isolation	SGS-PL-V086A	2
Steam Line Condensate Drain Isolation	SGS-PL-V086B	2
Power-Operated Relief Valve	SGS-PL-V233A	2
Power-Operated Relief Valve	SGS-PL-V233B	2
MSIV Bypass Isolation Valve	SGS-PL-V240A	2
MSIV Bypass Isolation Valve	SGSPL-V240B	2
Main Feedwater Control Valve	SGS-PL-V250A	2
Main Feedwater Control Valve	SGS-PL-V250B	2
Startup Feedwater Control Valve	SGS-PL-V255A	2
Startup Feedwater Control Valve	SGS-PL-V255B	2
MCR Isolation Valve	VBS-PL-V186	2
MCR Isolation Valve	VBS-PL-V187	2
MCR Isolation Valve	VBS-PL-V188	2
MCR Isolation Valve	VBS-PL-V189	2
MCR Isolation Valve	VBS-PL-V190	2
MCR Isolation Valve	VBS-PL-V191	2
Air Delivery Isolation Valve	VES-PL-V001	2
Pressure Regulator Valve A	VES-PL-V002A	2
Pressure Regulator Valve B	VES-PL-V002B	2
Actuation Valve A	VES-PL-V005A	2
Actuation Valve B	VES-PL-V005B	2
Relief Isolation Valve A	VES-PL-V022A	2
Relief Isolation Valve B	VES-PL-V022B	2

Table 3I.6-3 (Sheet 11 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Air Tank Relief A	VES-PL-V040A	2
Air Tank Relief B	VES-PL-V040B	2
Air Tank Relief A	VES-PL-V041A	2
Air Tank Relief B	VES-PL-V041B	2
Main Air Flow Path Isolation Valve	VES-PL-V044	2
Containment Purge Inlet Isolation	VFS-PL-V003	2
Containment Purge Inlet Isolation	VFS-PL-V004	2
Containment Purge Discharge Isolation	VFS-PL-V009	2
Containment Purge Discharge Isolation	VFS-PL-V010	2
Vacuum Relief Containment Isolation Valve A - ORC	VFS-PL-V800A	2
Vacuum Relief Containment Isolation Valve B - ORC	VFS-PL-V800B	2
Vacuum Relief Containment Isolation Check Valve A - IRC	VFS-PL-V803A	2
Vacuum Relief Containment Isolation Check Valve B - IRC	VFS-PL-V803B	2
Fan Cooler Supply Isolation	VWS-PL-V058	2
Fan Cooler Supply Isolation	VWS-PL-V062	2
VWS Containment Isolation Relief	VWS-PL-V080	2
Fan Cooler Return Isolation	VWS-PL-V082	2
Fan Cooler Return Isolation	VWS-PL-V086	2
Sump Containment Isolation IRC	WLS-PL-V055	2
Sump Containment Isolation ORC	WLS-PL-V057	2
WLS Containment Isolation Relief	WLS-PL-V058	2
RCDT Gas Containment Isolation	WLS-PL-V067	2
RCDT Gas Containment Isolation	WLS-PL-V068	2
CVS To Sump	WLS-PL-V071 A	2
PXS A To Sump	WLS-PL-V071 B	2

Table 3I.6-3 (Sheet 12 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
PXS B To Sump	WLS-PL-V071 C	2
CVS To Sump	WLS-PL-V072 A	2
PXS A To Sump	WLS-PL-V072 B	2
PXS B To Sump	WLS-PL-V072 C	2
Miscellaneous		
Nonactive Valves		
Containment Penetration Test Connection Isolation	CAS-PL-V027	2
Service Air Supply Outside Containment Isolation	CAS-PL-V204	2
Containment Penetration Test Connection Isolation	CAS-PL-V219	2
Containment Isolation Valve Test Connection – Outlet Line	CCS-PL-V209	2
CCS Supply Containment Isolation – IRC	CCS-PL-V214	2
CCS Supply Containment Isolation Valve Test Connection – IRC	CCS-PL-V215	2
Containment Leak Test Outlet Line – IRC	CCS-PL-V216	2
Containment Isolation Valve V207 Body Test Connection Valve	CCS-PL-V217	2
Containment Isolation Valve Test Connection – Inlet Line	CCS-PL-V257	2
Resin Flush IRC Isolation	CVS-PL-V040	2
Resin Flush ORC Isolation	CVS-PL-V041	2
Letdown PZR Instrument Root	CVS-PL-V046	2
H2 Mkup Containment Isolation Thermal Relief Valve	CVS-PL-V065	2
Hydrogen Add Cont Isolation Test Connection	CVS-PL-V095	2
Hydrogen Addition Containment Isolation Test Connection	CVS-PL-V096	2
Demin Water Supply Containment Isolation – Outside	DWS-PL-V244	2
Containment Penetration Test Connection Isolation	DWS-PL-V248	2
Fire Water Containment Test Connection Isolation	FPS-PL-V049	2
Fire Water Containment Supply Isolation	FPS-PL-V050	2

Table 3I.6-3 (Sheet 13 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Fire Water Containment Test Connection Isolation	FPS-PL-V051	2
Flow Transmitter FT001 Root Valve	PCS-PL-V010A	2
Flow Transmitter FT001 Root Valve	PCS-PL-V010B	2
Flow Transmitter FT002 Root Valve	PCS-PL-V011A	2
Flow Transmitter FT001 Root Valve	PCS-PL-V011B	2
Flow Transmitter FT003 Root Valve	PCS-PL-V012A	2
Flow Transmitter FT003 Root Valve	PCS-PL-V012B	2
Flow Transmitter FT004 Root Valve	PCS-PL-V013A	2
Flow Transmitter FT004 Root Valve	PCS-PL-V013B	2
PCCWST Drain Isolation Valve	PCS-PL-V016	2
PCCWST Isolation Valve Leakage Detection Drain	PCS-PL-V029	2
PCCWST Isolation Valve Leakage Detection Crossconn	PCS-PL-V030	2
PCCWST Level Instrument Root Valve	PCS-PL-V031A	2
PCCWST Level Instrument Root Valve	PCS-PL-V031B	2
Recirculation Pump Suction from Long Term Makeup Isolation Valve	PCS-PL-V033	2
Spent Fuel Pool Emergency Makeup Isolation	PLS-PL-V052	2
Hot Leg 1 Sample Isolation	PSS-PL-V001A	2
Hot Leg 2 Sample Isolation	PSS-PL-V001B	2
Pressurizer Sample Isolation	PSS-PL-V003	2
PXS Accumulator Sample Isolation	PSS-PL-V004A	2
PXS Accumulator Sample Isolation	PSS-PL-V004B	2
PXS CMT A Sample Isolation	PSS-PL-V005A	2
PXS CMT B Sample Isolation	PSS-PL-V005B	2
PXS CMT A Sample Isolation	PSS-PL-V005C	2

Table 3I.6-3 (Sheet 14 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
PXS CMT B Sample Isolation	PSS-PL-V005D	2
Liquid Sample Check Valve	PSS-PL-V012A	2
Liquid Sample Check Valve	PSS-PL-V012B	2
Containment Testing Boundary Isolation Valve	PSS-PL-V076A	2
Containment Testing Boundary Isolation Valve	PSS-PL-V076B	2
Containment Isolation Test Connection Isolation Valve	PSS-PL-V082	2
Containment Isolation Test Connection Isolation Valve	PSS-PL-V083	2
Containment Isolation Test Connection Isolation Valve	PSS-PL-V085	2
Containment Isolation Test Connection Isolation Valve	PSS-PL-V086	2
Core Makeup Tank A CL Inlet Isolation	PXS-PL-V002A	2
Core Makeup Tank B CL Inlet Isolation	PXS-PL-V002B	2
Core Makeup Tank A Upper Sample	PXS-PL-V010A	2
Core Makeup Tank B Upper Sample	PXS-PL-V010B	2
Core Makeup Tank A Lower Sample	PXS-PL-V011A	2
Core Makeup Tank B Lower Sample	PXS-PL-V011B	2
Core Makeup Tank A Drain	PXS-PL-V012A	2
Core Makeup Tank B Drain	PXS-PL-V012B	2
Core Makeup Tank Discharge Manual Isolation	PXS-PL-V013A	2
Core Makeup Tank B Discharge Manual Isolation	PXS-PL-V013B	2
RNS to CMT Injection Line A Drain	PXS-PL-V019A	2
RNS to CMT Injection Line B Drain	PXS-PL-V019B	2
IRWST Injection Line A Drain	PXS-PL-V020A	2
IRWST Injection Line B Drain	PXS-PL-V020B	2
Accumulator A N_2 Vent	PXS-PL-V021A	2
Accumulator B N_2 Vent	PXS-PL-V021B	2

Table 3I.6-3 (Sheet 15 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Accumulator A PZR Transmitter Isolation	PXS-PL-V023A	2
Accumulator B PZR Transmitter Isolation	PXS-PL-V023B	2
Accumulator A PZR Transmitter Isolation	PXS-PL-V024A	2
Accumulator B PZR Transmitter Isolation	PXS-PL-V024B	2
Accumulator A Sample	PXS-PL-V025A	2
Accumulator B Sample	PXS-PL-V025B	2
Accumulator A Drain	PXS-PL-V026A	2
Accumulator B Drain	PXS-PL-V026B	2
Accumulator A Discharge Isolation	PXS-PL-V027A	2
Accumulator B Discharge Isolation	PXS-PL-V027B	2
Core Makeup Tank A Highpoint Vent	PXS-PL-V030A	2
Core Makeup Tank B Highpoint Vent	PXS-PL-V030B	2
Core Makeup Tank A Highpoint Vent	PXS-PL-V031A	2
Core Makeup Tank B Highpoint Vent	PXS-PL-V031B	2
Accumulator A Check Valve Drain	PXS-PL-V033A	2
Accumulator B Check Valve Drain	PXS-PL-V033B	2
Accumulator N_2 Containment Penetration Test Connection	PXS-PL-V052	2
CMT A Wide Level Upper Root	PXS-PL-V080A	2
CMT B Wide Level Upper Root	PXS-PL-V080B	2
CMT A Wide Level Lower Root	PXS-PL-V081A	2
CMT B Wide Level Lower Root	PXS-PL-V081B	2
CMT A Upper Level A Isolation 1	PXS-PL-V082A	2
CMT B Upper Level A Isolation 1	PXS-PL-V082B	2
CMT A Upper Level A Isolation 2	PXS-PL-V083A	2
CMT B Upper Level A Isolation 2	PXS-PL-V083B	2
CMT A Upper Level A Vent	PXS-PL-V084A	2

Table 3I.6-3 (Sheet 16 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
CMT B Upper Level A Vent	PXS-PL-V084B	2
CMT A Upper Level A Drain	PXS-PL-V085A	2
CMT B Upper Level A Drain	PXS-PL-V085B	2
CMT A Upper Level B Isolation 1	PXS-PL-V086A	2
CMT B Upper Level B Isolation 1	PXS-PL-V086B	2
CMT A Upper Level B Isolation 2	PXS-PL-V087A	2
CMT B Upper Level B Isolation 2	PXS-PL-V087B	2
CMT A Upper Level B Vent	PXS-PL-V088A	2
CMT B Upper Level B Vent	PXS-PL-V088B	2
CMT A Upper Level B Drain	PXS-PL-V089A	2
CMT B Upper Level B Drain	PXS-PL-V089B	2
CMT A Lower Level A Isolation 1	PXS-PL-V092A	2
CMT B Lower Level A Isolation 1	PXS-PL-V092B	2
CMT A Lower Level A Isolation 2	PXS-PL-V093A	2
CMT B Lower Level A Isolation 2	PXS-PL-V093B	2
CMT A Lower Level A Vent	PXS-PL-V094A	2
CMT B Lower Level A Vent	PXS-PL-V094B	2
CMT A Lower Level A Drain	PXS-PL-V095A	2
CMT B Lower Level A Drain	PXS-PL-V095B	2
CMT A Lower Level B Isolation 1	PXS-PL-V096A	2
CMT B Lower Level B Isolation 1	PXS-PL-V096B	2
CMT A Lower Level B Isolation 2	PXS-PL-V097A	2
CMT B Lower Level B Isolation 2	PXS-PL-V097B	2
CMT A Lower Level B Vent	PXS-PL-V098A	2
CMT B Lower Level B Vent	PXS-PL-V098B	2

Table 3I.6-3 (Sheet 17 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
CMT A Lower Level B Drain	PXS-PL-V099A	2
CMT B Lower Level B Drain	PXS-PL-V099B	2
PRHR HX Inlet Isolation	PXS-PL-V101	2
PRHR HX Inlet Head Vent	PXS-PL-V102A	2
PRHR HX Inlet Head Drain	PXS-PL-V102B	2
PRHR HX Outlet Head Vent	PXS-PL-V103A	2
PRHR HX Outlet Head Drain	PXS-PL-V103B	2
PRHR HX Flow Transmitter A Isolation	PXS-PL-V104A	2
PRHR HX Flow Transmitter B Isolation	PXS-PL-V104B	2
PRHR HX Flow Transmitter A Isolation	PXS-PL-V105A	2
PRHR HX Flow Transmitter B Isolation	PXS-PL-V105B	2
Containment Recirculation A Highpoint Vent	PXS-PL-V106	2
Containment Recirculation A Highpoint Vent	PXS-PL-V107	2
PRHR HX/RCS Return Isolation	PXS-PL-V109	2
PRHR HX Highpoint Vent	PXS-PL-V111A	2
PRHR HX Highpoint Vent	PXS-PL-V111B	2
PRHR HX PZR Transmitter Isolation	PXS-PL-V113	2
Containment Recirculation A Drain	PXS-PL-V115A	2
Containment Recirculation B Drain	PXS-PL-V115B	2
Containment Recirculation A Drain	PXS-PL-V116A	2
Containment Recirculation B Drain	PXS-PL-V116B	2
Recirc Sump A Isolation	PXS-PL-V117A	2
Recirc Sump B Isolation	PXS-PL-V117B	2
IRWST Line A Isolation	PXS-PL-V121A	2
IRWST Line B Isolation	PXS-PL-V121B	2
IRWST Injection Check Test	PXS-PL-V126A	2

Table 3I.6-3 (Sheet 18 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
IRWST Injection Check Test	PXS-PL-V126B	2
IRWST Injection Line A Drain	PXS-PL-V127	2
IRWST Injection Check Test	PXS-PL-V128A	2
IRWST Injection Check Test	PXS-PL-V128B	2
IRWST Injection Check Test	PXS-PL-V129A	2
IRWST Injection Check Test	PXS-PL-V129B	2
IRWST Injection Line A Drain	PXS-PL-V131A	2
IRWST Injection Line B Drain	PXS-PL-V131B	2
IRWST Injection Line A Drain	PXS-PL-V132A	2
IRWST Injection Line B Drain	PXS-PL-V132B	2
IRWST Injection Line A Highpoint Vent	PXS-PL-V133A	2
IRWST Injection Line B Highpoint Vent	PXS-PL-V133B	2
IRWST Injection Line A Highpoint Vent	PXS-PL-V134A	2
IRWST Injection Line B Highpoint Vent	PXS-PL-V134B	2
IRWST Injection Line A Highpoint Vent Isolation	PXS-PL-V135A	2
IRWST Injection Line B Highpoint Vent Isolation	PXS-PL-V135B	2
RNS Suction Pump Line Drain	PXS-PL-V149	2
IRWST Level Transmitter A Isolation	PXS-PL-V150A	2
IRWST Level Transmitter B Isolation	PXS-PL-V150B	2
IRWST Level Transmitter C Isolation	PXS-PL-V150C	2
IRWST Level Transmitter D Isolation	PXS-PL-V150D	2
IRWST Level Transmitter A Isolation	PXS-PL-V151A	2
IRWST Level Transmitter B Isolation	PXS-PL-V151B	2
IRWST Level Transmitter C Isolation	PXS-PL-V151C	2
IRWST Level Transmitter D Isolation	PXS-PL-V151D	2
Accumulator A Leak Test	PXS-PL-V201A	2

Table 3I.6-3 (Sheet 19 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Accumulator B Leak Test	PXS-PL-V201B	2
Accumulator A Leak Test	PXS-PL-V202A	2
Accumulator B Leak Test	PXS-PL-V202B	2
RNS Discharge Leak Test	PXS-PL-V205A	2
RNS Discharge Leak Test	PXS-PL-V205B	2
RNS Discharge Leak Test	PXS-PL-V206	2
RNS Suction Leak Test	PXS-PL-V207A	2
RNS Suction Leak Test	PXS-PL-V207B	2
RNS Suction Leak Test	PXS-PL-V208A	2
Core Makeup Tank A Fill Isolation	PXS-PL-V230A	2
Core Makeup Tank B Fill Isolation	PXS-PL-V230B	2
Core Makeup Tank A Fill Check	PXS-PL-V231A	2
Core Makeup Tank B Fill Check	PXS-PL-V231B	2
Accumulator A Fill/Drain Isolation	PXS-PL-V232A	2
Accumulator B Fill/Drain Isolation	PXS-PL-V232B	2
CMT A Check Valve Test Valve	PXS-PL-V250A	2
CMT B Check Valve Test Valve	PXS-PL-V250B	2
CMT A Check Valve Test Valve	PXS-PL-V251A	2
CMT B Check Valve Test Valve	PXS-PL-V251B	2
CMT A Check Valve Test Valve	PXS-PL-V252A	2
CMT B Check Valve Test Valve	PXS-PL-V252B	2
ADS Test Valve	RCS-PL-V007A	2
ADS Test Valve	RCS-PL-V007B	2
Fourth Stage ADS Isolation	RCS-PL-V014A	2
Fourth Stage ADS Isolation	RCS-PL-V014B	2
Fourth Stage ADS Isolation	RCS-PL-V014C	2

Table 3I.6-3 (Sheet 20 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Fourth Stage ADS Isolation	RCS-PL-V014D	2
Hot Leg 2 Level Instrument Root	RCS-PL-V095	2
Hot Leg 2 Level Instrument Root	RCS-PL-V096	2
Hot Leg 1 Level Instrument Root	RCS-PL-V097	2
Hot Leg 1 Level Instrument Root	RCS-PL-V098	2
Hot Leg 1 Flow Instrument Root	RCS-PL-V101A	2
Hot Leg 1 Flow Instrument Root	RCS-PL-V101B	2
Hot Leg 1 Flow Instrument Root	RCS-PL-V101C	2
Hot Leg 1 Flow Instrument Root	RCS-PL-V101D	2
Hot Leg 1 Flow Instrument Root	RCS-PL-V101E	2
Hot Leg 1 Flow Instrument Root	RCS-PL-V101F	2
Hot Leg 2 Flow Instrument Root	RCS-PL-V102A	2
Hot Leg 2 Flow Instrument Root	RCS-PL-V102B	2
Hot Leg 2 Flow Instrument Root	RCS-PL-V102C	2
Hot Leg 2 Flow Instrument Root	RCS-PL-V102D	2
Hot Leg 2 Flow Instrument Root	RCS-PL-V102E	2
Hot Leg 2 Flow Instrument Root	RCS-PL-V102F	2
PRHR HX Outlet Line Drain	RCS-PL-V103	2
Hot Leg 1 Sample Isolation	RCS-PL-V108A	2
Hot Leg 2 Sample Isolation	RCS-PL-V108B	2
PZR Spray Valve	RCS-PL-V110A	2
PZR Spray Valve	RCS-PL-V110B	2
PZR Spray Block Valve	RCS-PL-V111A	2
PZR Spray Block Valve	RCS-PL-V111B	2
Cold Leg 1A Bend Instrument Root	RCS-PL-V171A	2

Table 3I.6-3 (Sheet 21 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Cold Leg 1A Bend Instrument Root	RCS-PL-V171B	2
Cold Leg 1B Bend Instrument Root	RCS-PL-V172A	2
Cold Leg 1B Bend Instrument Root	RCS-PL-V172B	2
Cold Leg 2A Bend Instrument Root	RCS-PL-V173A	2
Cold Leg 2A Bend Instrument Root	RCS-PL-V173B	2
Cold Leg 2B Bend Instrument Root	RCS-PL-V174A	2
Cold Leg 2B Bend Instrument Root	RCS-PL-V174B	2
PZR Manual Vent	RCS-PL-V204	2
PZR Manual Vent	RCS-PL-V205	2
PZR Spray Bypass	RCS-PL-V210A	2
PZR Spray Bypass	RCS-PL-V210B	2
PZR Level Steam Space Instrument Root	RCS-PL-V225A	2
PZR Level Steam Space Instrument Root	RCS-PL-V225B	2
PZR Level Steam Space Instrument Root	RCS-PL-V225C	2
PZR Level Steam Space Instrument Root	RCS-PL-V225D	2
PZR Level Liquid Space Instrument Root	RCS-PL-V226A	2
PZR Level Liquid Space Instrument Root	RCS-PL-V226B	2
PZR Level Liquid Space Instrument Root	RCS-PL-V226C	2
PZR Level Liquid Space Instrument Root	RCS-PL-V226D	2
Wide Range PZR Level Steam Space Instrument Root	RCS-PL-V228	2
Wide Range PZR Level Liquid Space Instrument Root	RCS-PL-V229	2
Manual Head Vent	RCS-PL-V232	2
Head Vent Isolation	RCS-PL-V233	2
ADS Valve Discharge Header Drain Isolation	RCS-PL-V241	2
RCP 1A Flush	RCS-PL-V260A	2

Table 3I.6-3 (Sheet 22 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
RCP 1B Flush	RCS-PL-V260B	2
RCP 2A Flush	RCS-PL-V260C	2
RCP 2B Flush	RCS-PL-V260D	2
RCP 1A Drain	RCS-PL-V261A	2
RCP 1B Drain	RCS-PL-V261B	2
RCP 2A Drain	RCS-PL-V261C	2
RCP 2B Drain	RCS-PL-V261D	2
RCS Pressure Boundary Valve Thermal Relief Isolation	RNS-PL-V004A	2
RCS Pressure Boundary Valve Thermal Relief Isolation	RNS-PL-V004B	2
RNS Pump A Suction Isolation	RNS-PL-V005A	2
RNS Pump B Suction Isolation	RNS-PL-V005B	2
RNS HX A Outlet Flow Control	RNS-PL-V006A	2
RNS HX B Outlet Flow Control	RNS-PL-V006B	2
RNS Pump A Discharge Isolation	RNS-PL-V007A	2
RNS Pump B Discharge Isolation	RNS-PL-V007B	2
RNS HX A Bypass Flow Control	RNS-PL-V008A	2
RNS HX B Bypass Flow Control	RNS-PL-V008B	2
RNS Discharge Containment Isolation Valve Test	RNS-PL-V010	2
RNS Discharge Containment Isolation Valve Test Connection	RNS-PL-V014	2
RNS Discharge Containment Penetration Isolation Valves Test	RNS-PL-V016	2
RNS Discharge to IRWST Isolation	RNS-PL-V024	2
RNS Discharge to CVS	RNS-PL-V029	2
RNS Train A Discharge Flow Instrument Isolation	RNS-PL-V031A	2
RNS Train B Discharge Flow Instrument Isolation	RNS-PL-V031B	2

Table 3I.6-3 (Sheet 23 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
RNS Train A Discharge Flow Instrument Isolation	RNS-PL-V032A	2
RNS Train B Discharge Flow Instrument Isolation	RNS-PL-V032B	2
RNS Pump A Suction Pressure Instrument Isolation	RNS-PL-V033A	2
RNS Pump B Suction Pressure Instrument Isolation	RNS-PL-V033B	2
RNS Pump A Discharge Pressure Instrument Isolation	RNS-PL-V034A	2
RNS Pump B Discharge Pressure Instrument Isolation	RNS-PL-V034B	2
RNS Pump A Suction Piping Drain Isolation	RNS-PL-V036A	2
RNS Pump B Suction Piping Drain Isolation	RNS-PL-V036B	2
RNS HX A Channel Head Drain Isolation	RNS-PL-V046A	2
RNS HX B Channel Head Drain Isolation	RNS-PL-V046B	2
RNS Pump A Casing Drain Isolation	RNS-PL-V050	2
RNS Pump B Casing Drain Isolation	RNS-PL-V051	2
RNS Suction from SFP Isolation	RNS-PL-V052	2
RNS Discharge to SFP Isolation	RNS-PL-V053	2
RNS Suction from Cask Loading Pit Isolation Valve	RNS-PL-V055	2
RNS Pump Suction to Cask Loading Pit Isolation	RNS-PL-V056	2
RNS Train A Miniflow Isolation Valve	RNS-PL-V057A	2
RNS Train B Miniflow Isolation Valve	RNS-PL-V057B	2
RNS Pump Suction Containment Isolation Test Connection	RNS-PL-V059	2
RNS Discharge to DVI Line A Drain	RNS-PL-V066A	2
RNS Discharge to DVI Line B Drain	RNS-PL-V066B	2
RNS Discharge to DVI Line A Drain	RNS-PL-V067A	2
RNS Discharge to DVI Line B Drain	RNS-PL-V067B	2
RNS Discharge to IRWST Drain	RNS-PL-V068	2
LT019A Root Isolation Valve	SFS-PL-V024A	2
LT019B Root Isolation Valve	SFS-PL-V024B	2

Table 3I.6-3 (Sheet 24 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
LT019C Root Isolation Valve	SFS-PL-V024C	2
LT020 Root Isolation Valve	SFS-PL-V028	2
SFS Refueling Cavity Drain To SGS Compartment Isolation	SFS-PL-V031	2
SFS Refueling Cavity Suction Isolation	SFS-PL-V032	2
SFS Refueling Cavity Drain to Containment Sump Isolation	SFS-PL-V033	2
SFS Suction Line from IRWST Isolation	SFS-PL-V039	2
SFS Fuel Transfer Canal Suction Isolation	SFS-PL-V040	2
SFS Cask Loading Pit Suction Isolation	SFS-PL-V041	2
SFS CVS Makeup Reverse Flow Prevention	SFS-PL-V043	2
SFS Containment Penetration Test Connection	SFS-PL-V048	2
SFS Containment Penetration Test Connection Isolation	SFS-PL-V056	2
SFS Containment Isolation Valve V034 Test	SFS-PL-V058	2
SFS Containment Floodup Isolation Valve	SFS-PL-V075	2
LT001 Root Isolation Valve	SGS-PL-V001A	2
LT005 Root Isolation Valve	SGS-PL-V001B	2
LT001 Root Isolation Valve	SGS-PL-V002A	2
LT005 Root Isolation Valve	SGS-PL-V002B	2
LT002 Root Isolation Valve	SGS-PL-V003A	2
LT006 Root Isolation Valve	SGS-PL-V003B	2
LT002 Root Isolation Valve	SGS-PL-V004A	2
LT006 Root Isolation Valve	SGS-PL-V004B	2
LT003 Root Isolation Valve	SGS-PL-V005A	2
LT007 Root Isolation Valve	SGS-PL-V005B	2
LT003 Root Isolation Valve	SGS-PL-V006A	2
LT007 Root Isolation Valve	SGS-PL-V006B	2
LT004 Root Isolation Valve	SGS-PL-V007A	2

Table 3I.6-3 (Sheet 25 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
LT008 Root Isolation Valve	SGS-PL-V007B	2
LT004 Root Isolation Valve	SGS-PL-V008A	2
LT008 Root Isolation Valve	SGS-PL-V008B	2
LT011 Root Isolation Valve	SGS-PL-V010A	2
LT013 Root Isolation Valve	SGS-PL-V010B	2
LT011 Root Isolation Valve	SGS-PL-V011A	2
LT013 Root Isolation Valve	SGS-PL-V011B	2
LT012 Root Isolation Valve	SGS-PL-V012A	2
LT014 Root Isolation Valve	SGS-PL-V012B	2
LT012 Root Isolation Valve	SGS-PL-V013A	2
LT014 Root Isolation Valve	SGS-PL-V013B	2
FT021 Root Isolation Valve	SGS-PL-V015A	2
FT023 Root Isolation Valve	SGS-PL-V015B	2
FT020 Root Isolation Valve	SGS-PL-V016A	2
FT022 Root Isolation Valve	SGS-PL-V016B	2
FT021 Root Isolation Valve	SGS-PL-V017A	2
FT023 Root Isolation Valve	SGS-PL-V017B	2
FT020 Root Isolation Valve	SGS-PL-V018A	2
FT022 Root Isolation Valve	SGS-PL-V018B	2
Main Steam Line Vent Isolation	SGS-PL-V019A	2
Main Steam Line Vent Isolation	SGS-PL-V019B	2
PT030 Root Isolation Valve	SGS-PL-V022A	2
PT034 Root Isolation Valve	SGS-PL-V022B	2
PT031 Root Isolation Valve	SGS-PL-V023A	2
PT035 Root Isolation Valve	SGS-PL-V023B	2
PT032 Root Isolation Valve	SGS-PL-V024A	2

Table 3I.6-3 (Sheet 26 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
PT036 Root Isolation Valve	SGS-PL-V024B	2
PT033 Root Isolation Valve	SGS-PL-V025A	2
PT037 Root Isolation Valve	SGS-PL-V025B	2
Steam Line 1 Nitrogen Supply Isolation	SGS-PL-V038A	2
Steam Line 2 Nitrogen Supply Isolation	SGS-PL-V038B	2
MSIV Bypass Control Isolation	SGS-PL-V042A	2
MSIV Bypass Control Isolation	SGS-PL-V042B	2
MSIV Bypass Control Isolation	SGS-PL-V043A	2
MSIV Bypass Control Isolation	SGS-PL-V043B	2
SG1 Condensate Pipe Drain Valve	SGS-PL-V045A	2
SG2 Condensate Pipe Drain Valve	SGS-PL-V045B	2
LT015 Root Isolation Valve	SGS-PL-V046A	2
LT017 Root Isolation Valve	SGS-PL-V046B	2
LT015 Root Isolation Valve	SGS-PL-V047A	2
LT017 Root Isolation Valve	SGS-PL-V047B	2
LT016 Root Isolation Valve	SGS-PL-V048A	2
LT018 Root Isolation Valve	SGS-PL-V048B	2
LT016 Root Isolation Valve	SGS-PL-V049A	2
LT018 Root Isolation Valve	SGS-PL-V049B	2
LT044 Root Isolation Valve	SGS-PL-V050A	2
LT046 Root Isolation Valve	SGS-PL-V050B	2
LT044 Root Isolation Valve	SGS-PL-V051A	2
LT046 Root Isolation Valve	SGS-PL-V051B	2
LT045 Root Isolation Valve	SGS-PL-V052A	2
LT047 Root Isolation Valve	SGS-PL-V052B	2
LT045 Root Isolation Valve	SGS-PL-V053A	2

Table 3I.6-3 (Sheet 27 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
LT047 Root Isolation Valve	SGS-PL-V053B	2
PT062 Root Isolation Valve	SGS-PL-V056A	2
PT063 Root Isolation Valve	SGS-PL-V056B	2
Main Feedwater Check	SGS-PL-V058A	2
Main Feedwater Check	SGS-PL-V058B	2
FT055A Root Isolation Valve	SGS-PL-V062A	2
FT056A Root Isolation Valve	SGS-PL-V062B	2
FT055A Root Isolation Valve	SGS-PL-V063A	2
FT056A Root Isolation Valve	SGS-PL-V063B	2
FT055A Root Isolation Valve	SGS-PL-V064A	2
FT056A Root Isolation Valve	SGS-PL-V064B	2
FT055A Root Isolation Valve	SGS-PL-V065A	2
FT056A Root Isolation Valve	SGS-PL-V065B	2
SG1 Nitrogen Sparging Isolation	SGS-PL-V084A	2
SG2 Nitrogen Sparging Isolation	SGS-PL-V084B	2
Orifice Isolation Valve	SGS-PL-V093A	2
Orifice Isolation Valve	SGS-PL-V093B	2
Orifice Cleanout Line Isolation Valve	SGS-PL-V094A	2
Orifice Cleanout Line Isolation Valve	SGS-PL-V094B	2
Orifice Isolation Valve	SGS-PL-V095A	2
Orifice Isolation Valve	SGS-PL-V095B	2
Steam Line Condensate Drain Level Isolation Valve	SGS-PL-V096A	2
Steam Line Condensate Drain Level Isolation Valve	SGS-PL-V096B	2
Steam Line Condensate Drain Level Isolation Valve	SGS-PL-V097A	2
Steam Line Condensate Drain Level Isolation Valve	SGS-PL-V097B	2
Startup Feedwater Check Valve	SGS-PL-V256A	2

Table 3I.6-3 (Sheet 28 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Startup Feedwater Check Valve	SGS-PL-V256B	2
Air Delivery Line Pressure Instrument Isolation Valve A	VES-PL-V006A	2
Air Delivery Line Pressure Instrument Isolation Valve B	VES-PL-V006B	2
Temporary Instrument Isolation Valve A	VES-PL-V016	2
Temporary Instrument Isolation Valve A	VES-PL-V018	2
Temporary Instrument Isolation Valve B	VES-PL-V019	2
Temporary Instrument Isolation Valve B	VES-PL-V020	2
Air Tank Isolation Valve A	VES-PL-V024A	2
Air Tank Isolation Valve B	VES-PL-V024B	2
Air Tank Isolation Valve A	VES-PL-V025A	2
Air Tank Isolation Valve B	VES-PL-V025B	2
Refill Line Isolation Valve	VES-PL-V038	2
DP Instrument Line Isolation Valve A	VES-PL-V043A	2
DP Instrument Line Isolation Valve B	VES-PL-V043B	2
Containment Isolation Test Connection	VFS-PL-V008	2
Containment Isolation Test Connection	VFS-PL-V012	2
Containment Isolation Test Connection	VFS-PL-V015	2
Main Equipment Hatch Test Connection	VUS-PL-V015	2
Maintenance Equipment Hatch Test Connection	VUS-PL-V016	2
Personnel Hatch Test Connection	VUS-PL-V017	2
Personnel Hatch Test Connection	VUS-PL-V018	2
Personnel Hatch Test Connection	VUS-PL-V019	2
Personnel Hatch Test Connection	VUS-PL-V020	2
Personnel Hatch Test Connection	VUS-PL-V021	2
Personnel Hatch Test Connection	VUS-PL-V022	2
Fuel Transfer Tube Test Connection	VUS-PL-V023	2

Table 3I.6-3 (Sheet 29 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Electrical Penetration Test Isolation Valve	VUS-PL-V101	2
Electrical Penetration Test Isolation Valve	VUS-PL-V102	2
Electrical Penetration Test Isolation Valve	VUS-PL-V103	2
Electrical Penetration Test Isolation Valve	VUS-PL-V104	2
Electrical Penetration Test Isolation Valve	VUS-PL-V105	2
Electrical Penetration Test Isolation Valve	VUS-PL-V106	2
Electrical Penetration Test Isolation Valve	VUS-PL-V107	2
Electrical Penetration Test Isolation Valve	VUS-PL-V108	2
Electrical Penetration Test Isolation Valve	VUS-PL-V109	2
Electrical Penetration Test Isolation Valve	VUS-PL-V110	2
Electrical Penetration Test Isolation Valve	VUS-PL-V111	2
Electrical Penetration Test Isolation Valve	VUS-PL-V112	2
Electrical Penetration Test Isolation Valve	VUS-PL-V113	2
Electrical Penetration Test Isolation Valve	VUS-PL-V114	2
Electrical Penetration Test Isolation Valve	VUS-PL-V115	2
Electrical Penetration Test Isolation Valve	VUS-PL-V116	2
Electrical Penetration Test Isolation Valve	VUS-PL-V117	2
Electrical Penetration Test Isolation Valve	VUS-PL-V118	2
Electrical Penetration Test Isolation Valve	VUS-PL-V119	2
Electrical Penetration Test Isolation Valve	VUS-PL-V120	2
Electrical Penetration Test Isolation Valve	VUS-PL-V121	2
Electrical Penetration Test Isolation Valve	VUS-PL-V122	2
Electrical Penetration Test Isolation Valve	VUS-PL-V123	2
Electrical Penetration Test Isolation Valve	VUS-PL-V124	2
Electrical Penetration Test Isolation Valve	VUS-PL-V125	2

Table 3I.6-3 (Sheet 30 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Spare Penetration Test Connection	VUS-PL-V140	2
Spare Penetration Test Connection	VUS-PL-V141	2
Spare Penetration Test Connection	VUS-PL-V142	2
VWS Supply Containment Penetration IRC Test Connection/Vent	VWS-PL-V424	2
VWS Return Containment Penetration ORC Test Connection/Vent	VWS-PL-V425	2
Heat Exchangers		
Normal Residual Heat Removal Heat Exchanger A	RNS-ME-01A	3
Normal Residual Heat Removal Heat Exchanger B	RNS-ME-01B	3
Tanks		
Spent Fuel Pool	FHS-MT-01	3
Fuel Transfer Canal	FHS-MT-02	3
Spent Fuel Cask Loading Pit	FHS-MT-05	3
Passive Containment Cooling Water Storage Tank	PCS-MT-01	3
Water Distribution Bucket	PCS-MT-03	3
Water Collection Troughs	PCS-MT-04	3
Passive RHR Heat Exchanger	PXS-ME-01	3
Accumulator Tank A	PXS-MT-01A	3
Accumulator Tank B	PXS-MT-01B	3
Core Makeup Tank A	PXS-MT-02A	3
Core Makeup Tank B	PXS-MT-02B	3
In-Containment Refueling Water Storage Tank	PXS-MT-03	3
Emergency Air Storage Tank 01	VES-MT-01	3
Emergency Air Storage Tank 02	VES-MT-02	3
Emergency Air Storage Tank 03	VES-MT-03	3
Emergency Air Storage Tank 04	VES-MT-04	3

Table 3I.6-3 (Sheet 31 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Emergency Air Storage Tank 05	VES-MT-05	3
Emergency Air Storage Tank 06	VES-MT-06	3
Emergency Air Storage Tank 07	VES-MT-07	3
Emergency Air Storage Tank 08	VES-MT-08	3
Emergency Air Storage Tank 09	VES-MT-09	3
Emergency Air Storage Tank 10	VES-MT-10	3
Emergency Air Storage Tank 11	VES-MT-11	3
Emergency Air Storage Tank 12	VES-MT-12	3
Emergency Air Storage Tank 13	VES-MT-13	3
Emergency Air Storage Tank 14	VES-MT-14	3
Emergency Air Storage Tank 15	VES-MT-15	3
Emergency Air Storage Tank 16	VES-MT-16	3
Emergency Air Storage Tank 17	VES-MT-17	3
Emergency Air Storage Tank 18	VES-MT-18	3
Emergency Air Storage Tank 19	VES-MT-19	3
Emergency Air Storage Tank 20	VES-MT-20	3
Emergency Air Storage Tank 21	VES-MT-21	3
Emergency Air Storage Tank 22	VES-MT-22	3
Emergency Air Storage Tank 23	VES-MT-23	3
Emergency Air Storage Tank 24	VES-MT-24	3
Emergency Air Storage Tank 25	VES-MT-25	3
Emergency Air Storage Tank 26	VES-MT-26	3
Emergency Air Storage Tank 27	VES-MT-27	3
Emergency Air Storage Tank 28	VES-MT-28	3
Emergency Air Storage Tank 29	VES-MT-29	3
Emergency Air Storage Tank 30	VES-MT-30	3

Table 3I.6-3 (Sheet 32 of 32)

LIST OF AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT NOT HIGH FREQUENCY SENSITIVE

Description	AP1000 Tag Number	Comment
Emergency Air Storage Tank 31	VES-MT-31	3
Emergency Air Storage Tank 32	VES-MT-32	3
Main Feed Pump A Status	ECS-ES-3-XXX	4
Main Feed Pump B Status	ECS-ES-4-XXX	4
Main Feed Pump C Status	ECS-ES-5-XXX	4

Notes:

1. Rugged AP1000 safety-related equipment with no moving parts required in demonstrating functional operability during a seismic event is considered to be not sensitive to HRHF seismic loadings. Seismic qualification is based on the seismic loads associated with the mounting location of the safety-related equipment as a minimum. AP1000 CSDRS seismic loads at the mounting location of the safety-related equipment produces comparable or higher equipment stresses and deflections than the HRHF seismic loadings based on the work reported in APP-GW-GLR-115, "Effect of High Frequency Seismic Content on SSCs." For rugged safety-related line-mounted equipment being qualified by test, seismic testing will be performed in compliance with IEEE Standard 382-1996 with a required input motion (RIM) curve extended to 64 Hz typically to a peak acceleration of 6g.
2. AP1000 safety-related valves are seismic qualified in accordance with ASME code for structural integrity to a maximum acceleration of 6g in all three principal orthogonal axes. AP1000 CSDRS seismic loads at the mounting location of the safety-related equipment produce comparable or higher equipment stresses and deflections than the HRHF seismic loadings based on the work reported in APP-GW-GLR-115, "Effect of High Frequency Seismic Content on SSCs." For rugged safety-related line-mounted equipment being qualified by test, seismic testing will be performed in compliance with IEEE Standard 382-1996 with a required input motion (RIM) curve extended to 64 Hz typically to a peak acceleration of 6g.
3. Seismic qualification is based on structural integrity alone to the seismic loadings associated with the mounting location of the safety-related equipment as a minimum. AP1000 CSDRS seismic loads at the mounting location of the safety-related equipment produce comparable or higher equipment stresses and deflections than the HRHF seismic loadings based on the work reported in APP-GW-GLR-115, "Effect of High Frequency Seismic Content on SSCs."
4. Seismic qualification is not required.

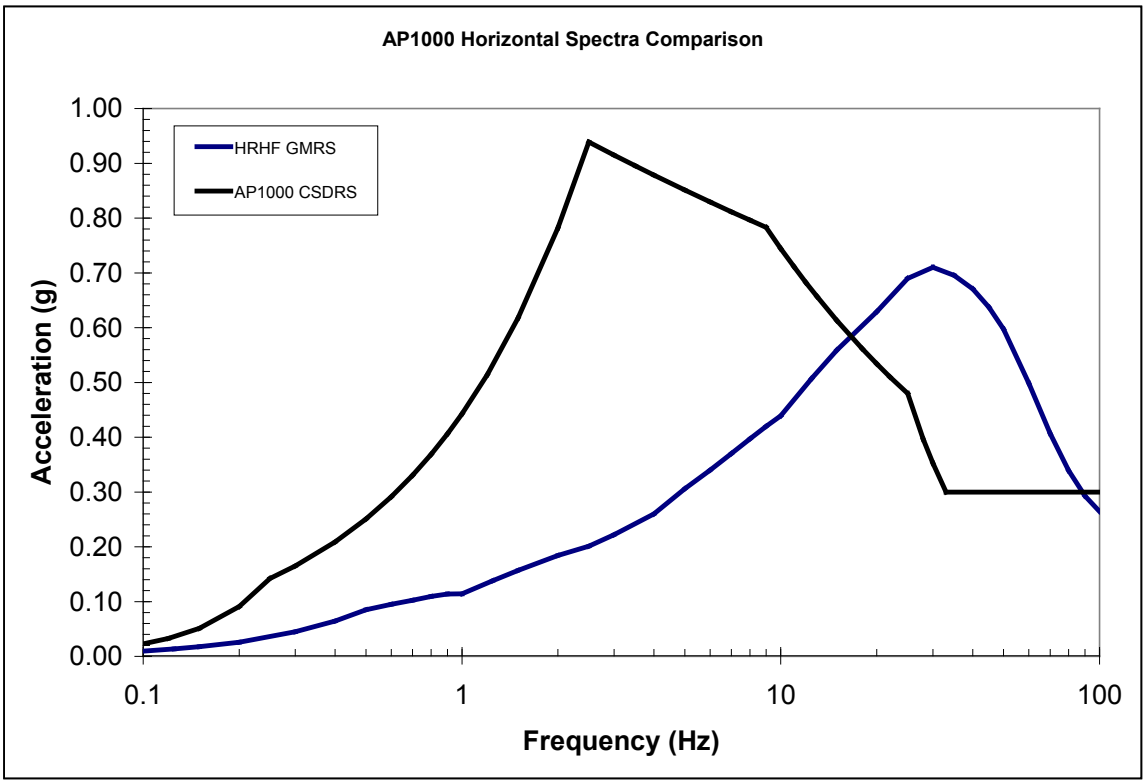

Figure 3I.1-1

Comparison of Horizontal AP1000 CSDRS and HRHF Envelope Response Spectra

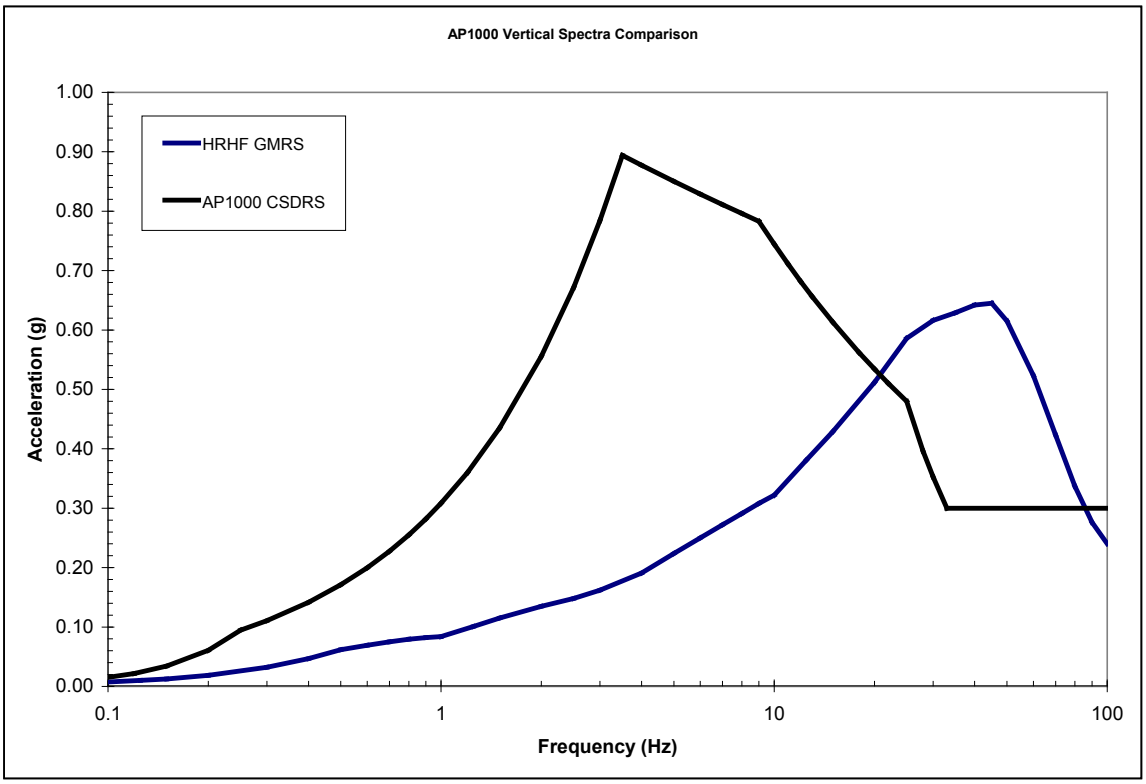

Figure 3I.1-2

Comparison of Vertical AP1000 CSDRS and HRHF Envelope Response Spectra